# JUNE 16, 1945 Founded in 1836

IT'S A GREAT NEW DAY FOR RAILROADING

# HALF A MILLION MILES WITH 100% AVAILABILITY



two General Motors

5

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ng

Diesel passenger locomotives

in nine successive months-

April to December 1944-

rolled up the impressive total

of 502,866 miles with 100% availability.

Their total mileage since purchase,

December 1941,

2,024,986.

ON TO FINAL VICTORY BUY MORE WAR BONDS

### ELECTRO-MOTIVE DIVISION

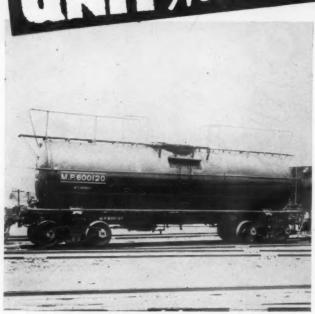
GENERAL MOTORS CORPORATION

LA GRANGE, ILL.

# UNIT Newsletter

### UNIT TRUCK CORPORATION

140 Cedar Street New York 6, N. Y.





Here's the story behind our June 2nd advertisement in RAILWAY AGE. Back in July 1938 the first Unit Truck application was installed on Missouri Pacific Auxiliary Water Car M. P. 600120. We knew Unit Brake Beams were good for at least half a million miles — so we kept our fingers crossed and wished M. P. 600120 bon voyage.

In April 1945 Missouri Pacific notified us—"Unit Brake Beams on M. P. 600120 after 605,817 miles of service show practically no wear on brake heads and wear-plates." This was it! This was the proof of every claim we had ever made for Unit! That's why we felt mighty good when we okayed that June 2nd copy.





Now—in offices, business cars, clubs, wherever and whenever busy "brass hats" talk shop—they're talking about Unit. Users of the 29,999 Unit car sets now in service feel mighty good about it, for old M. P. 600120 has justified both our claims for Unit and their faith in us. The others say—"Sounds good, but that's a lot of miles. We'll believe it when we see it!"

That's why M. P. 600120's original Unit Brake Beams now occupy the place of honor in our permanent exhibit in New York. Next time you're in town drop around and we'll make you welcome. Actually seeing the evidence of this sensational performance will surely convince you. Meanwhile—we're wondering just who is going to buy that thirty thousandth Unit Truck.



### PRPORATION

ew York 6, N. Y.



notified us—"Unit fiter 605,817 miles wear on brake as it! This was ad ever made for y good when we



Unit Brake Beams
n our permanent
you're in town
u welcome. Acsensational peru. Meanwhile—
ing to buy that

ss matter, January 4, 1933, Canada. Single copies, 25

RAILWAY AGE

# MINER

FRICTION DRAFT GEARS

POSITIVE IN

STURDY

ABSOLUTELY RELIABLE

WAH. MINER, INC.

CHICAGO

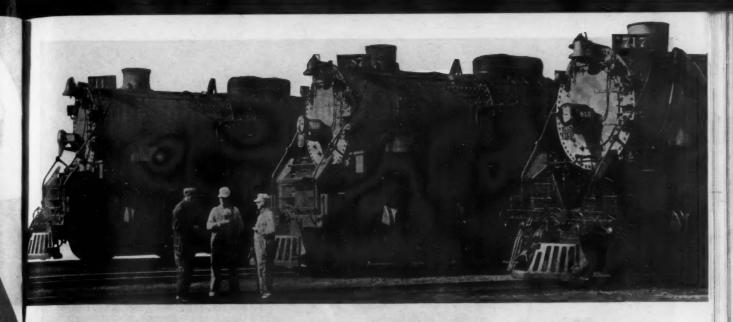
PROVING THEIR MERIT-Year After Year-





MES WITEON

GENERAL STEEL



### COMMONWEALTH LOCOMOTIVE BEDS



Service records of all types of locomotives equipped with COMMONWEALTH CAST STEEL LOCOMOTIVE BEDS are conclusive evidence that Cast Steel Beds keep locomotives in action longer—enable them to move more passengers and freight, with less time out for repairs.

One-Piece Locomotive Beds greatly simplify locomotive design and construction, eliminate many separate parts, assure permanent alignment of frame and cylinders and provide greater strength with less weight.

All-important in these days of intensive service, COMMONWEALTH BEDS reduce shopping time, man-hours of labor, repair and maintenance expense.

CASTINGS EDDYSTONE, PA. GRANITE CITY, ILL.





The high standard of efficiency set by Nickel Plate's shops is reflected in this road's splendid maintenance record. The Baker Crane Truck illustrated, operating in the company's Conneaut, Ohio roundhouse, contributes materially to this efficiency.

Some of the operations this truck performs:

REMOVES AND APPLIES — Cylinder heads and back valve heads
Air compressors Feed water pumps Air compressors Pistons and valves Motor work and side rods Air drums Springs (driving and trailing) Stacks and extensions Booster steam and exhaust fines boxes to their respective journals Feed water heater and extension pipes Super heater units Engine truck and tank wheels and trans-Exhaust boxes Driving brake cylinders

### APPLIES-

Valve and cylinder boring machinery

### REMOVES AND APPLIES-

Driving boxes, engine trucks and trailer

### TRANSPORTS-

ports other materials to and from the roundhouse to the cleaning vats.

There is a Baker representative near you who will be glad. to show you how these operations can be speeded up in your shop. Get in touch with him, or write us direct.

### BAKER INDUSTRIAL TRUCK DIVISION

of The Baker-Raulang Company 2172 WEST 25TH STREET . CLEVELAND, OHIO In Canada: Railway and Power Engineering Corporation, Ltd.



(Above) Baker Crane Truck transporting engine wheels from roundbouse to erecting shop for repair. (Below) Baker Crane Truck removing pedestal binder from pit for repair.

Baker industrial trucks

### NOW IT'S "TARGET---TOKYO"

### A billion dollars-

It's still a lot of money, even in 1945.

That's what this country's western railroads spent to gear their lines to the challenge thrown at them with the east-to-west turnabout of war transport that came with victory in Europe.

As one after another of Hitler's armies were crushed, U. S. war planners swung to the job of concentrating maximum power against Japan in the Pacific.

It was almost like trying to turn back the Mississippi-like forcing it upstream from the Gulf.

Western and midwestern roads had seen the flood of tanks, planes and guns coming. They had known a huge load would fall on them after V-E day—and \$650 millions spent on road beds and structures, and \$400 millions spent on locomotives and cars, helped them get ready for it. The lines that set munitions and supplies down on west coast docks—the Santa Fe, Southern Pacific, Union Pacific, Western Pacific, Great Northern, Northern Pacific, and The Milwaukee Road—had carried on vast programs of track-laying, installing centralized traffic control, cutting down grades, eliminating bad curves.

Construction crews worked night and day to drive new 130-pound rail—over the mountains and across deserts. These roads bought powerful new locomotives and cars to the very limit of available materials.

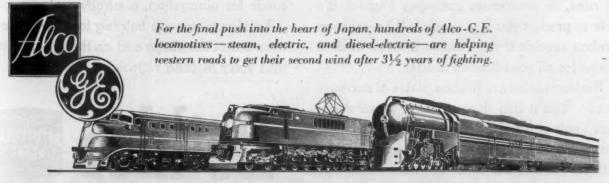
The lines connecting with them and backing them up in speeding eastern industry's war output to the Pacific expanded, too—roads like the Missouri Pacific, Denver & Rio Grande, Western Rock Island, Burlington, Chicago and Northwestern, and Texas & Pacific.

Some western roads have actually doubled their capacity in the last five years; the average increase is 70 per cent. There's been nothing like it since the early rail lines drove their steel across the Rockies and climbed the Sierras and Cascades to reach the coast.

It's "Target—Tokyo" now, and America's railroads are drawing the bead just as grimly as they did on Berlin—and they'll stay at it until victory is complete and final.

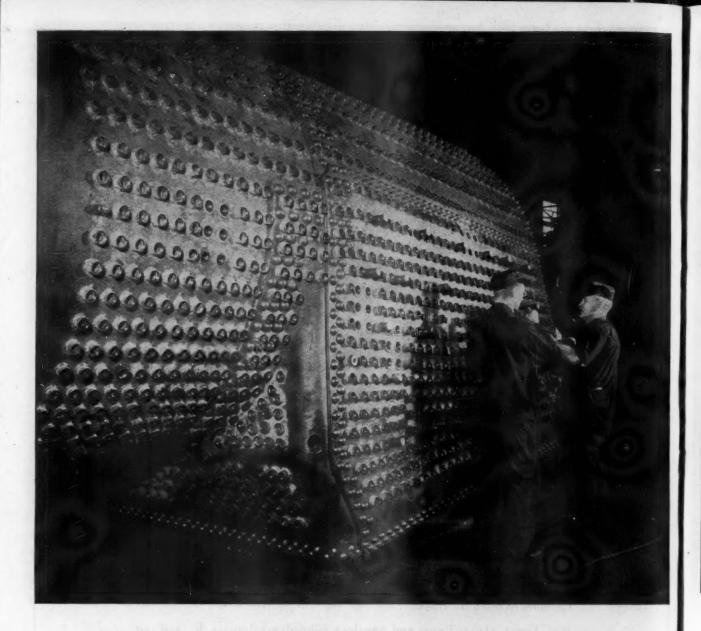
The Trackwalker \*





AMERICAN LOCOMOTIVE • GEN Copr., 1945, American Locomotive Company and General Electric Company \*Reg. U.S. Pat. Co

• GENERAL ELECTRIC



### How long will a firebox last?

Regardless of the frequency and length of runs, or enormous tonnages hauled, it's safe to predict you'll get longer-than-average firebox service if you choose Bethloc firebox plates for all your firebox needs.

Bethloc plates are firebox plates of superior grade. You'll like their uniform grain structure, their unusual toughness and ductility, the way the special low-carbon steel in them combats fatigue stresses caused by fluctuating temperatures and vibration. Moreover, Bethloc plates are little affected by aging, and more

than meet requirements established by the railroads for elongation, elasticity and strength.

Bethloc plates are helping to keep locomotives out of the shops and on the job on more than forty leading railroads.

Bethloc ETHLEHEN STEEL STEEL STEEL

# AMCRECO Creosoted PRODUCTS



... they help roads accomplish the difference between "paying the freight" and

making the freight pay!

### AMERICAN CREOSOTING COMPANY

COLONIAL CREOSOTING COMPANY



GEORGIA CREOSOTING COMPANY

ADDRESS INQUIRIES TO CHICAGO. ILL., OR LOUISVILLE, KY.

TIES · POLES · PILES · TIMBER

June 16, 1945

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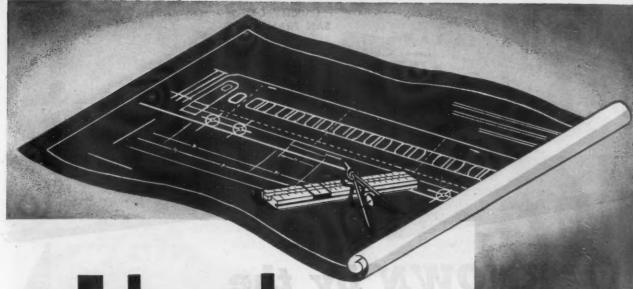
Fiberglas Passenger Car Insulation has been tested, approved and used extensively by every major railroad and car builder—on practically all deluxe "name trains."

The outstanding characteristics of Fiberglas make it the ideal Refrigerator Car Insulation and millions of square feet are giving complete satisfaction in this most rigorous service.

G-B Special Fiberglas Metal Mesh Blankets are installed on thousands of Tank Cars in commercial service and in the special transport service of Government Agencies.

# Fiberalas\* Fiderari Reg. U. S. Pat. Office To Direct. Contring Fiberglas Co. p.

G-B MFG.CO



# tiberglas

### IS THE WORD TO WRITE INTO THE INSULATION SECTION OF YOUR SPECIFICATIONS NOW!

Out of the urgency and new demands of war have come valuable new techniques and fabrications of Fiberglas insulations... developed through our close cooperation with the Navy, Army, Maritime Commission and shipyards. These extraordinary developments are available to railroads and car builders for the improved insulation, comfort and quietness of their passenger cars...and for better protection of refrigerated or chemical lading.

Fiberglas is fireproof, it relieves load on air-conditioning and heating equipment-it is light weight, provides no sustenance for vermin, will not sustain bacterial or fungus growths. Investigate the insulation that is permanent and efficient year after year and specify Fiberglas for your railroad cars while they are in the blue-print stage. Write us now for complete information.

Fiberglas' is Sold to Railroads and Car Builders exclusively by

**GUSTIN-BACON MANUFACTURING CO.** 

KANSAS CITY 7, MISSOURI

New York

Philadelphia

Chicago

Tulsa

Houston

Fort Worth



June 16, 1945

11



### KNOWN by the COMPANY they KEEP

Products, like persons, are readily known by the company they keep. Sinclair Lubricants are in the best of company—on crack trains of America's leading railroads.

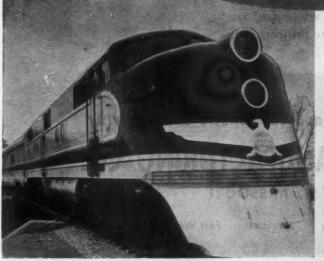
### SINCLAIR

### RAILROAD LUBRICANTS

SINCLAIR REFINING COMPANY, RAILWAY SALES
NEW YORK - CHICAGO - SAINT LOUIS - HOUSTON

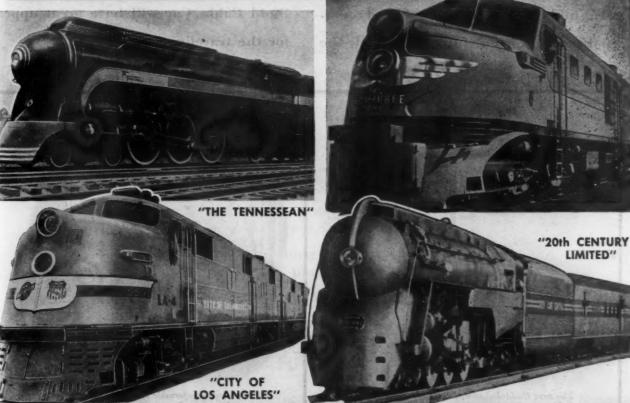
"MISSOURI RIVER EAGLE"

METEOR"









USED BY MORE THAN 150 AMERICAN RAILROADS

ER OR"

# Budd DESIGNS

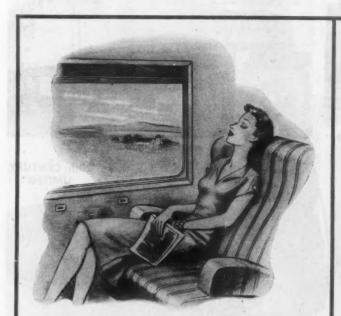
# Twenty-two Individual Room Accommodations for day and night travel

BUDD, creator of modern, stainless steel passenger cars has designed the twenty-two room Cabin Car. By ingenious use of the floor area and placement of room appointments this car sets a new standard for individual room accommodations.

Every room is on the main floor of the car. Full height with plenty of head room.

Spacious and beautifully appointed, the

Every room has its own broad window, adjustable reclining seat, toilet, clothes cabinet, folding wash basin, mirror and shoe cabinet. Each has individually controlled heat and air-conditioned ventilation. The folding bed is lowered and raised automatically by flicking a switch. The Budd Cabin Car will have great appeal for the traveling public.

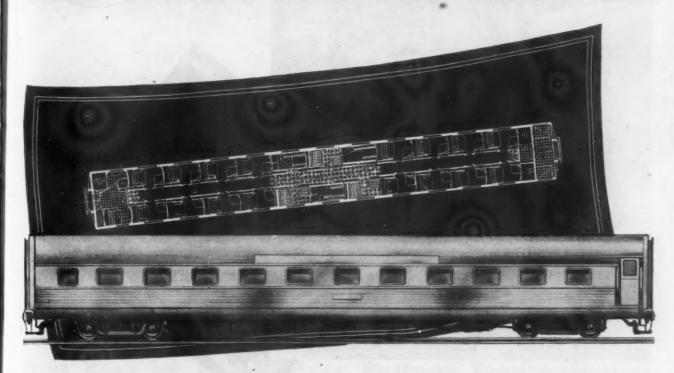


The new Budd-designed, lounge-type seat in The Cabin Car is adjustable for reclining. Arm rests fold into back of seat.



The deep, comfortable bed folds into the wall; is raised or lowered automatically by flicking a switch.

### NEW STAINLESS STEEL CABIN CAR



### SPECIAL CABIN CAR FEATURES

Luxurious seat of club chair type. Reclining and adjustable. Arm rests fold into back of seat.

Carpeted floors. Walls and ceilings are readily cleaned.

Rounded corners throughout. Easily cleaned—sanitary.

Night table and wardrobe.

Cantilever-hung ceramic water closet. Stainless steel folding wash basin.

Indirect illumination. Reading spotlight. Diffuser for air distribution. Wall-mounted bed lamp.

Accessible centralized plumbing and heating controls. Serviced through removable aisle wall panel.

Easily controlled floor heating unit. Eliminates floor heat duct.

EDWARD G. BUDD MANUFACTURING CO.

Dudd

PHILADELPHIA . DETROIT . NEW YORK . CHICAGO . ST. LOUIS . WASHINGTON . SAN FRANCISCO

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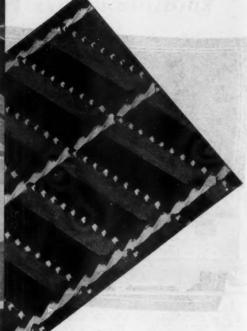
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For the Life of the Car...
and Perhaps His, 700

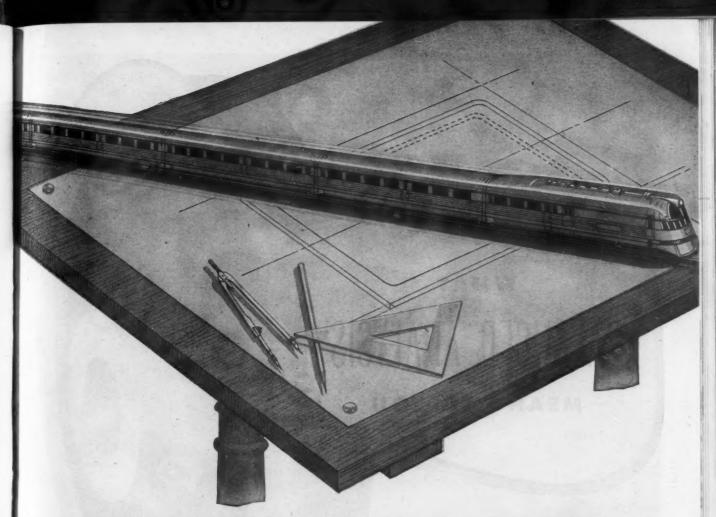
## BLAW-KNOX ELECTROFORGED STEEL RUNNING BOARDS

Without servicing, without additional expense these super-safe Running Boards and Brake Steps are good for the life of any Tank or Box Car. In all weathers the

solid, yet light one-piece electroforged construction provides sure footing for the men who are getting wartime freight through on schedule.

### BLAW-KNOX DIVISION OF BLAW-KNOX COMPANY

2061 FARMERS BANK BUILDING, PITTSBURGH, PA.



### New Eyes by Edwards for Postwar Transportation

To supply new eyes for America's postwar transportation system, Edwards is ready with a new and improved Double Glazed Dehydrated Sash. It has been designed and developed by Edwards engineers as a result of our years of experience supplying and checking sash under every type of service condition.

The new Edwards Double Glazed Dehydrated Sash will bring to the railroads of America these striking features:

Completely weatherproof — no fog, no film, no frost.

- Highly efficient insulation of the window areas while affording maximum passenger visibility.
- 3. Visual "telltale" indicator cartridge quickly and easily replaceable on the face sash top inner rail, indicating at a glance, by color, the condition of the dehydrating agent, to assure control of the moisture content in the dead air space.
- Long, maintenance-free service engineered and tested for troublefree service under all operating conditions.
- 5. Lighter in weight-without sacri-

fice of strength and rigidity.

- Completely assembled units easily, quickly, inexpensively installed and fitted to varying car designs.
- Lower cost per unit—because of Edwards improved design, production experience and use of modern materials.

So, plan now to avail yourself of the many advantages of Edwards Double Glazed Dehydrated Sash in your postwar equipment.

THE O. M. EDWARDS CO., INC. Syracuse, New York

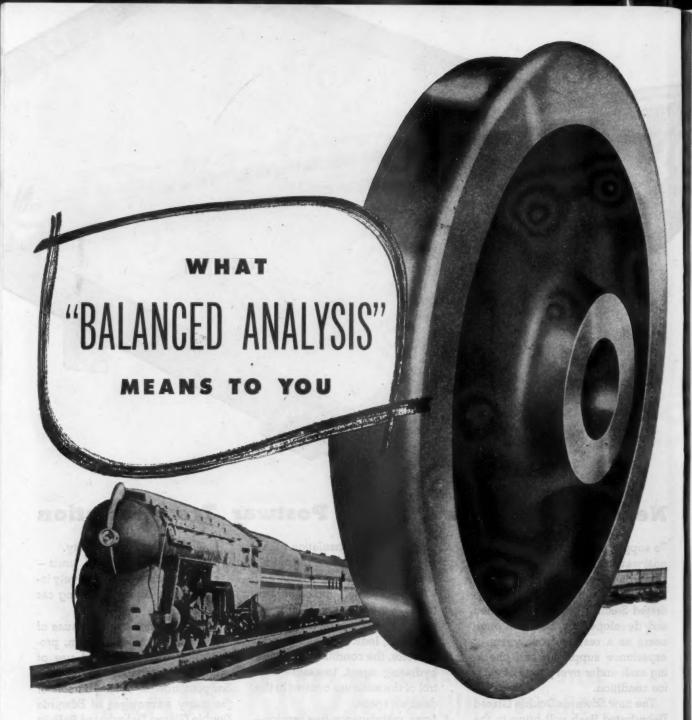


**EDWARDS SASH** 

THE EYES OF TRANSPORTATION



SH FOR EVERY TYPE OF TRANSPORTATION — ON LAND, ON THE SEAS, IN THE AIR



"Balanced analysis" is more than a slogan for ARMCO Stress Resistant Wheels. It's an exclusive process that gives wheels the highest resistance to shelling for a given resistance to thermal cracking.

This means greater safety and more profitable wheel miles for the vital years ahead. It's the big reason why 32 of the country's leading roads have ARMCO S-R Wheels in service.

These railworthy wheels not only start rolling with low internal stress,

but they strongly resist stresses built up in service. Your rolling stock keeps on the move in wartime traffic. Ask us for all the facts on ARMCO Stress Resistant Wheels. Just call our nearest district office, or write direct to Armco Railroad Sales Co. Incorporated, 1891 Curtis St., Middletown, O.



"THE WHEEL OF TOMORROW IS ROLLING TODAY"

Here's one industry where only the best equipment and machine tools are used, yes sir!

That is why you'll find the DoALL Contour Machim right up in front—in tool rooms, machine shops, on production lines.

Fastest method today for machining metals, al-

loys, laminutes, plastics, plywoods—the DoALL cuts through blocks; bors, tubing, stucked sheets -straight line or contour shaping-actional and internal work

Plane makers know their stuff-take a Hp from them. Investigate the DoALL right now.



MCO our rect rpoı, O.























JoAl

CONTINENTAL MACHINES, INC. 1345 S. Washington Avenue • Minneapolis 4, Minn.



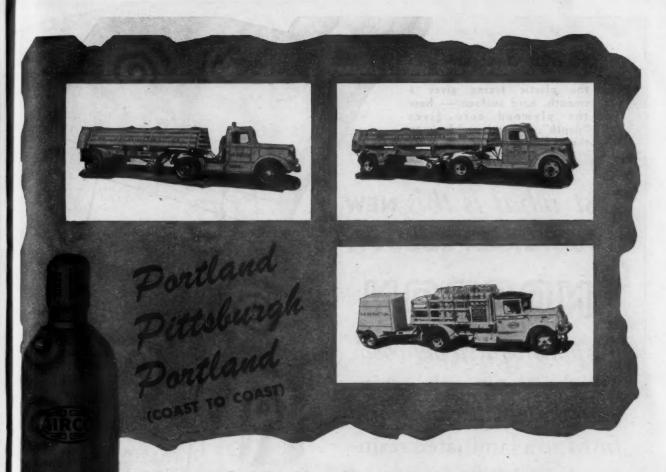
Modern industry and modern transportation alike depend on controlled circulation of vital fluids . . . oil, gases, water, steam. For these arterial systems, Barco Flexible Joints have provided necessary protection for over 30 years...guarding these mechanical "life-lines" against vibration and shock...compensating for contraction and expansion. For complete information, write to Barco Manufacturing Company, Not Inc., 1800 Winnemac Avenue, Chicago 40, Illinois. In Canada: The Holden Co., Ltd., Montreal, Canada.



THE FREE ENTERPRISE SYSTEM IS THE SALVATION OF AMERICAN BUSINESS

MOVE IN separate places and the state of the seas teating knowledge C. And Complete Compl Not just a swivel joint...but a com-bination of a swivel and ball joint with rotary motion and responsive move-ment through every

DIRECTION"



### Dependable local oxygen deliveries to industrial centers

WHEREVER your plant is located, you can depend on Airco for a steady supply of high-quality oxygen. Airco plants and warehouses throughout the nation supply oxygen in any volumefrom a hundred cubic feet to many million cubic feet monthly.

Airco oxygen is "packaged" to meet varied needs - in individual cylinders or in trailers. Whichever Airco delivery method you select, you always receive oxygen - guaranteed 99.5% pure in the cylinder. ● An interesting free booklet—"Oxygen—Indispensable Servant of Industry"-describes Airco's complete oxygen service. Write for a free copy to Dept. RA at the New York office.



CHICAGO SALES OFFICE



ral Offices: 60 EAST 42nd STREET, NEW YORK 17, N. Y.

MAGNOLIA AIRCO GAS PRODUCTS CO. . General Offices: HOUSTON 1, TEXAS

Offices in all Principal Cities

AIRCO OXYGEN GUARANTEED 99.5% PURE

IN THE CYLINDER

The sample of INDERON illustrated at the right, shows how the plastic facing gives a smooth, hard surface — how the plywood core gives "depth", strength and body to the plastic laminate.

# Just what is this NEW STRUCTURAL PRODUCT?

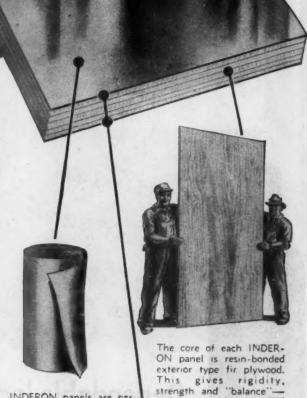
### INDERON

It is plastic-faced plywood. The hard, smooth, grain-less plastic is permanently fused to a laminated resinbonded plywood core.

NOW plastic and plywood have been combined —"alloyed" — to produce a structural product which offers the smooth, hard, permanently finished qualities of plastic plus the strength, durability and rigidity of exterior type plywood.

INDERON is waterproof — resistant to moisture and vapor — resistant to chemicals, decay, fungi and temperature changes. It is stable — strong, durable. It needs no surface protection — no additional decorative treatment.

In your postwar planning, consider the advantages of this smooth, hard-surfaced plastic-plywood laminate for freight car roofs and linings, for exterior siding, for station fixtures, for signs and markers, for refrigerator cars, for bulk-loading cars—for any structural use where low cost, workability, smoothness and strength are desirable. Three grades will be available—Standard, Decorative and Industrial. Write for complete data—today.



INDERON panels are permanently fáced with three or more layers of a resinimpregnated plastic. This gives INDERON its hard, smooth, durable surface.

stic facing is per-

The plastic facing is permanently fused to the plywood core by heat and pressure. It can't come loose! Plastic and plywood become, in effect, a single heat-bonded unit. Panels,

available in standard 4 x 8 foot sizes, are smooth, hard, strong, durable, yet easy to work, form and fasten.

makes possible a LOW COST plastic laminate,

with depth and body.

### Manufacturers

Buffelen Lumber & Mfg. Co. Washington Veneer Co.
Tacoma 2, Wash. Olympia, Wash.

For Information Write

CHICAGO SALES OFFICE

9 South Clinton St.,

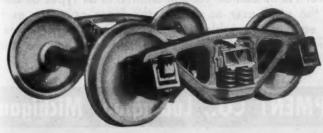
Chicago 8, Illinois

More than 50,000 closely charted miles of performance testing and over forty years of design, development, and production experience are combined in the A.S.F. Ride-Control Truck (A-3)\* acheva vodel basharegram antowark of O FINE CAST STEEL the balletisd-siduals a substitution before

> \* The modern truck for every type of freight service at any speed and under all loads.

A.S.F Ride-Control TRUCK

bratery TAMPERS for the w



Co.

TRAVEL - CONSTANT FRICTION CONTROL

**AMERICAN** STEEL FOUNDRIES

CHICAGO

"ROOKIES" LEARN QUICKLY





A group of high school boys operating JACKSON Vibratory Tampers on a large surfacing job of one of the leading railroads.

# JACKSON Tampers

In this day of manpower shortage when high school lads and any other inexperienced labor available must be resorted to, there's a double-barrelled advantage in using JACKSON vibratory TAMPERS. For, the weight of the machine, its unique vibratory action and the design of the blades all promote first class work with very little training of the operator. From Minnesota to Mexico and from coast to coast, in all vital areas, unskilled labor is operating JACKSON vibratory TAMPERS and making a noteworthy contribution to the track maintenance of many leading American Railways.

JACKSON Vibratory Tampers powered by JACKSON Power Plants can be used in all lifts, in all types of ballast, by the small user as well as the large operator as they are equally adaptable to small or large gangs. Write for literature describing this equipment and how to use it.

ELECTRIC TAMPER & EQUIPMENT CO., Ludington, Michigan



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Vibratory leading

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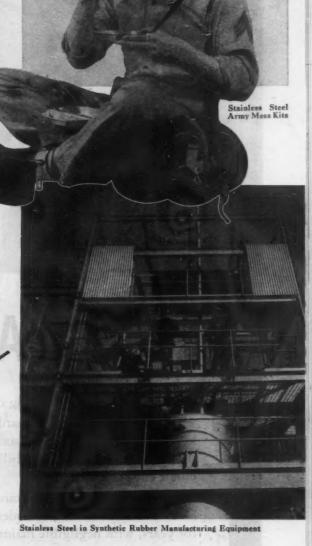
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ACE

Luck Service!

WE have been able to build up our warehouse stocks of U·S·S Stainless Steel. They include sheets, plates, bars of all kinds—rounds, squares, hexagons and angles—pipe, tubing, and welding electrodes in all standard grades and specifications. And every pound of U·S·S Stainless Steel has been made by specially trained personnel in plants particularly adapted for its manufacture. In STAINLESS, as in other steels, the letters "U·S·S" are your assurance of top quality.

Hundreds of new uses for Stainless Steel have been discovered in the course of production for war. Perhaps we can help you use it to advantage. Our engineers will assist you in selecting the proper type of U·S·S Stainless Steel for your requirements and will help you with fabricating problems. And we'll be glad to send you free technical bulletins upon request.



PHONE, WRITE OR WIRE our nearest warehouse when you need Stainless Steel. A call to us may help you avoid serious delay in vital war production. We are doing our best, under today's difficult conditions, to maintain our reputation for quick service. Your orders and inquiries will receive courteous attention and prompt action.

### UNITED STATES STEEL SUPPLY COMPANY

CHICAGO (90)

P. O. Box MM—BRUnswick 2000

BALTIMORE (3)

P. O. Box 2036—Gilmore 3100

BOSTON (34)

176 Lincoln \$1., Allston, P. O. Box 42

STAdium 9400

CLEVELAND (14)

1394 E. 39th \$1., HEnderson 5750

4027 West Scott St., P. O. Box 2045—Mitchell 7500 PITTSBURGH (12)

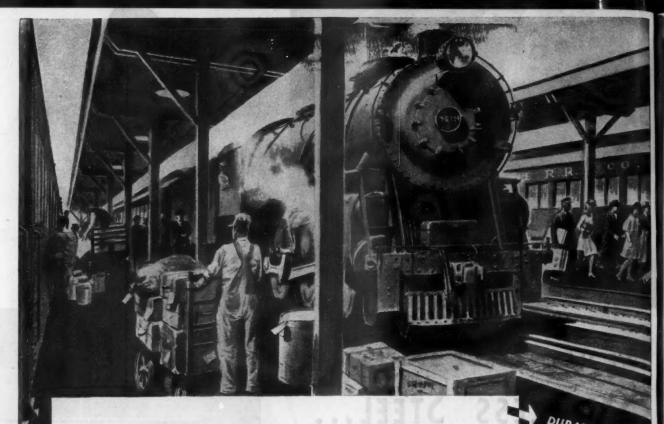
21st & Gratiot Sts., P. O. Bessemer St.,
P. O. Box 479—Bigelow 3-5920
REctor 2-6560, Bergen 3-1614
PITTSBURGH (12)

1281 Reedsdale St., N. S.
CEdar 7780
ST. LOUIS (3)

21st & Gratiot Sts., P. O. Box 27
MAIn 5235
TWIN CITY 2545 University Ave., St. Paul (4), Minn.

STEELS SERVICE

UNITED STATES STEEL



# Platform floorings must provide ALL FIVE...

and Flintkote Mastic Flooring does!

It has a *tough* surface, hard enough to bear up under the heaviest platform or freight station service, yet it is resilient and shock absorbing. Its malleability enables it to "heal" its own minor cuts.

This floor surfacing withstands vibration, takes heavy impact loads without cracking or indenting and it remains serviceable for years, with negligible maintenance cost.

It is dustless and noise deadening; its "cushion" effect reduces platform truck wear. It resists water and most common chemicals ... protects its base from rotting or corroding.

Flintkote Mastic Floorings may be applied quickly and easily over old floors or on new construction. Any reasonably strong base is satisfactory...wood, concrete, metal.

Write for complete information about cold laid Mastic flooring or other Flintkote Railroad Products—Car Cements—Asphalt Protective Coatings—Insulation Coatings—Building Materials—Waterproofing and Dampproofing Materials.

RESISTANCE TO VIBRATION

RESILIENCY

FREEDOM FROM "DUSTING"

RESISTANCE TO IMPACT



THE FLINTKOTE COMPANY - Industrial Products Div. - 30 Rockefeller Plaza, New York 20, N. Y. ATLANTA BOSTON CHICAGO HEIGHTS DETROIT LOS ANGELES NEW ORLEANS WASHINGTON TORONTO MONTREAL



known — the Ingersoll-Rand MT-3. The operator has only to guide it as the machine does the work. And the work is always uniform as the tamper strikes steady, even blows all day long. Fatigue does not affect the machine and its light weight and easy-holding qualities reduce operator fatigue to an absolute minimum.

To speed up your tie tamping operations, we suggest you investigate the MT-3 tamper and also I-R air compressors for the air power — both off- and on-track units are available.

AIR TOOLS
COMPRESSORS
ROCK DRILLS
TURBO BLOWERS
CONDENSERS
CENTRIFUGAL PUMPS
OIL & GAS ENGINES

Ingersoll-Rand

11 BROADWAY, NEW YORK 4, N. Y.

11-694

ON

ING"

REAL

ACE



Houdaille\* hydraulic
principle is so effective in
absorbing forces whose magnitudes fluctuate constantly.

First 10 years ago on America's pioneer streamlined train, Houdaille likewise is first today in the development of highly specialized railroad shock absorbers for vertical and lateral

control.

HOUDE ENGINEERING DIVISION OF HOUDAILLE-HERSHEY CORPORATION

MAKERS OF HYDRAULIC CONTROLS

BUFFALO 11, NEW YORK

\*Pronounced-Hoo-dye

## Interdependent Vevelopment THE STORY OF COAL

THE HISTORY OF RAILROADING

 Advanced mechanization has increased the production capacity of coal mines in many ways. For example, the electrically operated coal cutters which makes the oldtime miner's pick the symbol of a past era.

nloading from dern hopper cars a quick, efficient opation compared to and shoveling from he gondolas of yeseryear. Just one detail in the working out of a problem common to the railroads and coal producers.

### ICEMENTS IN DET UP TO BROAD PROGRESS

IN both the operation of railroads and the mining of coal, individual L examples of progress, multiplied many times, build up an over-all picture of amazing progress over a period of years. In almost every detail, this progress is parallel-throughout is emphasized the interdependence of these two vital industries which have made America great and prosperous. Coal builds and powers the railroads and accounts for twenty-five percent of the freight revenue of all the railroads combined.



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Time is the measure of all things.

Few of man's inventions can stand its merciless judgment. Yet Kerite for over 80 years has thrived and spread and gained renown. Time, indeed, gives Kerite its unqualified recommendation.



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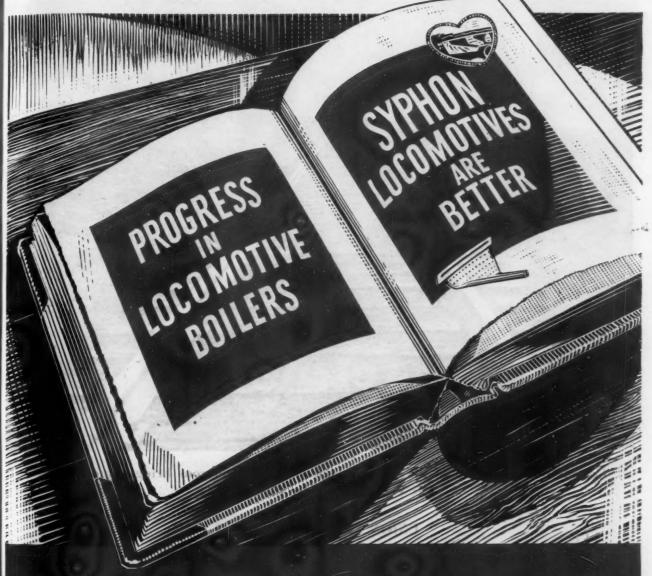


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Nicholson Thermic Syphons produce more boiler capacity with less weight, less steel, less cost, and for equivalent results assure greater economy in service and maintenance than larger boilers without Syphons, plus safety from boiler explosion.

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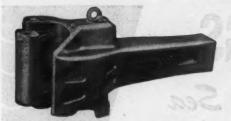
June 16, 1945

AGE

# NATIONAL PRODUCTS FOR RAILROAD EQUIPMENT



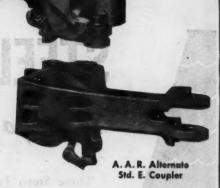
Type H Tightlock Coupler, Swivel Casting and Yoke



A. A. R. Std. E. Coupler



Naco Spun Steel Car Wheel





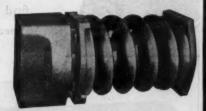
A. A. R. Std. Vertical Plane Horizontal Key Yoke



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M-50-B Draft Gear A. A. R. Approved



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Designers and Manufacturers of Freight Cars of all Types Including Air Dump Cars

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# TO CLEAN AND DRY STEEL QUICKLY Use Oxy-Acetylene Flame Equipment

• Oxweld's method for cleaning and drying metal surfaces prior to painting is fast, easy, and thorough. Flame-cleaning, followed by wire-brushing, removes all traces of surface moisture, rust, and scale. The metal is then warm and dry, ready for immediate painting. Paint applied to warm, dry steel will flow more freely, and bond

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Because the flame-cleaning process is so economical and easy to use, many steel surfaces—train sheds, bridges, pipes,

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Ask your Oxweld representative for more information about flame-cleaning. He will be glad to show you how you can use it to advantage.

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Unit of Union Carbide and Carbon Corporation

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Carbide and Carbon Building Chicago and New York



SINCE 1912-THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROAD.

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DIESEL LOCOMOTIVE BY

# FAIRBANKS-MORSE

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## "Blackhall" PATENT RAILROAD CAR WASHER

150 in Service Daily Washing Greyhound and Other Transit Busses.

Each Passenger Car Passes Through Washer in 1½ Minutes.

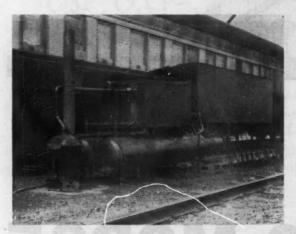




IN SUCCESSFUL SERVICE WASHING CLEAN - 115 CARS PER DAY

EACH MORNING THE "CAPITOL LIMITED" TRAIN OF 13 CARS IS THOROUGHLY CLEANED OF DIRT ON ITS CAR SIDES AUTOMATICALLY IN 30 MINUTES FOR

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ABOUT \$1.00 LABOR COST PER CAR IS SAVED OVER PREVIOUS HAND WASHING METHODS.

TWO LABORERS NOW USED.

One of the outstanding features of the "Blackhall" Railroad Car Washer is our use of the "Fullergript" anchored non-shredding washer brush, securely held in dove-tailed split aluminum brush hubs. The economy in the future use of Fuller brushes has been proven a great advantage over any other type of brush made. The photo at the left shows equipment for mixing water with Oakite Cleaner and spraying it on car sides 145 feet from the large brush which rubs the acid in after working on the dirt. Washer equipped with six brushes. Some cars require acid—others none—according to their condition.

"A RAILROAD CAR-WASHER IS JUST AS GOOD AS THE BRUSHES IT USES—NOT ONE BIT BETTER"



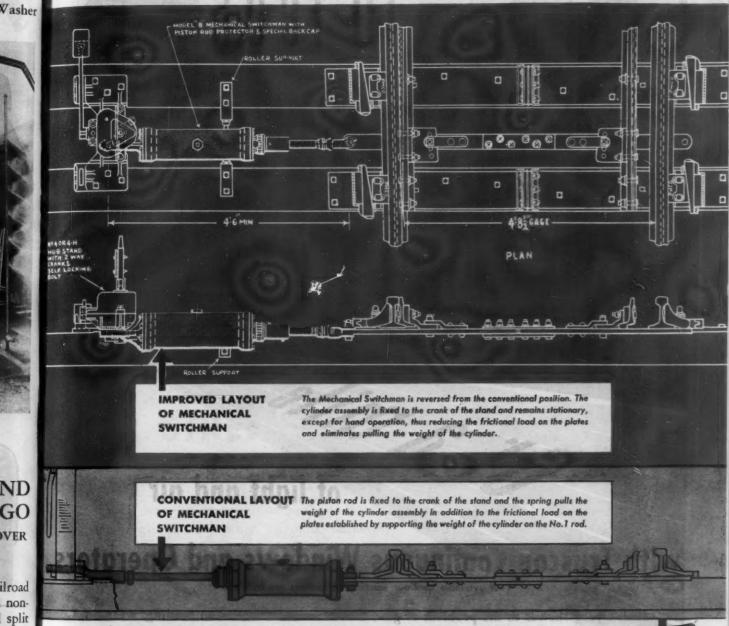
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# ROSS AND WHITE COMPANY

CHICAGO DAILY NEWS BUILDING, CHICAGO 6
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# ANICAL SWITC

## N Performance Improved By New Layout



1-REDUCED SPRING LOAD. The heavy end of the device when supported largely by the No. 1 head rod necessarily "holds down" the points on the plates, setting up a frictional load, effective while returning the points to the stock rail.

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Supporting the heavy end of the device on the crank of the stand and roller support, substantially reduces this frictional load.

In the conventional layout the piston rod is fixed to the crank of the stand, and the spring pulls the weight of the cylinder assembly in ad-

dition to returning the points to the stock rail.

Reversing this position, the cylinder assembly is fixed to the crank of the stand reducing the additional weight pulled by the spring to that of the piston rod only.

2-REDUCED WEAR. Piston and cylinder wear should be substantially reduced by both the reduction of spring load, and by moving only the piston rod within the cylinder rather than moving the weight of the device on the piston rod.

3-REDUCED VIBRATION. In its customary position, the heaviest portion or back cap end of the device is attached directly to the No. 1 head rod, subjected to the vibration at that point.

When the Mechanical Switchman is reversed, vibration of the switch will be dissipated in the piston rod before reaching the body of the mechanism itself. STEEL



NO. 4 HUB STAND—available in low or intermediate heights, is especially adapted for use with the Mechanical Switchman. Its dead center throwing arrangement and advantageous lever ratio facilitate accurate signal adjustment and adequate pressure of the point against the stock rail.

" Quality Since 1880"

# PETTIBONE MULLIKEN CORPORATION

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(not available until our wartime obligations are fulfilled)

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The use of Truscon Continuous Steel Windows and mechanical operators assures the delivery of ample light and fresh air to production floors, even during inclement weather.

Truscon Continuous Steel Windows are

hung on a continuous hinge, an exclusive time-proved Truscon feature, which insures straight alignment, positive weathering, and complete freedom for expansion and contraction. There is no binding, wear on pins, hinges or other fixed parts and no flashing is necessary.

For more than twenty-five years Truscon has coordinated the design and manufacture of mechanical operators with its complete line of steel windows, and has made constant improvements to meet the ever changing problems of industry. The benefit of all this

experience is available to you now. Request a Truscon window engineer to help you adapt these windows and operators to your postwar jobs.

### TRUSCON STEEL COMPANY

Youngstown 1, Ohio
Subsidiary of Republic Steel Corporation



Southern Railway Bridge, Almond, N.C. Designed and built by T. V. A.

# FOR STRENGTH...DURABILITY THEY TURNED TO POZZOLITH

THERE were three problems in building the above bridge piers, which now are largely submerged — workability, strength, durability.

Experience in millions of yards of concrete has proved that Pozzolith was the practical, economical answer to all because Pozzolith through its action of cement dispersion greatly increases the efficiency of cement and lowers water-cement ratio 12-15%.

Recent findings of the Nation's highest testing authority show that Pozzolith Concrete exposed to freezing and thawing in fresh or salt water is 400-500% more durable and has greater strength than plain concrete. These and other tests made in this exhaustive investigation prove that Pozzolith marks a new era of concrete performance.

The trend in concrete construction is toward Pozzolith because cement dispersion assures faster construction, vastly improved concrete, with lower construction and maintenance costs.

THE MASTER BUILDERS COMPANY
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# WHY A

This you can count on when you specify Cummins Dependable Diesels for the railroad equipment you build or operate:

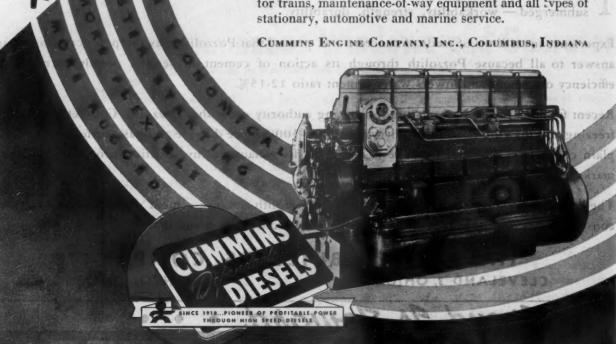
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Savings in maintenance cost . . . assured by rugged construction . . . easily accessible, easily removable parts and accessories . . . availability of complete service facilities and replacement parts anywhere in the country.

Savings in time . . . assured by the Cummins Diesel's exceptional flexibility . . . all-weather instant starting ... 24-hour-a-day dependability.

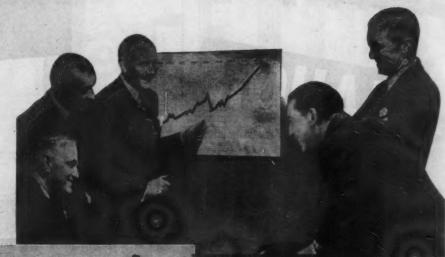
Savings in weight and space . . . assured by refinements in design, construction and materials which have reduced weight per horsepower to as low as 101/2 pounds.

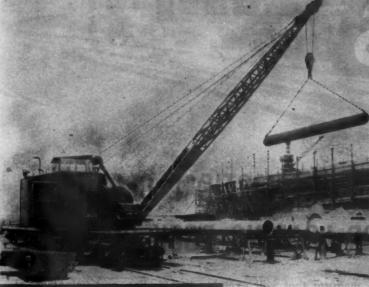
These are the reasons why Cummins Dependable Diesels are your most profitable investment in power. Models designed for-and proved in-switching locomotives, motor trains, maintenance-of-way equipment and all types of



### I B CRANES HELP SPEED PRODUCTION QUOTAS IN SCORES OF INDUSTRIES

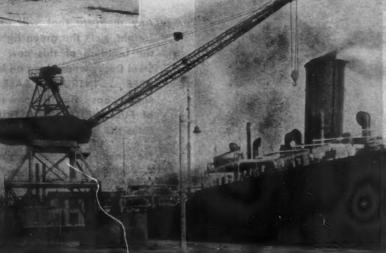
In steel mills and factories, at coal and ore docks, on rail-roads and in construction operations, Industrial Brownhoist cranes, bridges and car dumpers are reducing costs and speeding up material handling.





Whether equipped with magnet, hook or bucket, the sturdy LB. Diesel Locomotive Crane, pictured here, is known the world over for its long life and law cost operation. Note the potented Monitor-type cab which increases operation of efficiency because it allows 160° visibility and assures better ventilation.

This I.B. 4 Motor Electric Traveling Portal Piar Crame handles steel plates and beams and girders, with ease at an eastern shippard. The 110 foot boom handles 34 fons at 35 feet and 11 tons at 110 feet. For the answer to your material handling problems, get complete facts from 1. B.





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Any measure that will expedite the loading and unloading of freight, gets the green light from railroads today. That is why, in the building of this new loading dock terminal, Mahon Rolling Steel Doors were given an immediate okay. FIRE SAFE... WEATHER SAFE... INTRUSION SAFE... Mahon Rolling Steel Doors provide simple, easy, positive power or hand operation, plus the advantage of FULL WIDTH UNOBSTRUCTED OPENINGS, which greatly facilitates the handling of merchandise.

No other doors offer the many advantages of design and construction developed by Mahon.

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LIGHT WEIGHT... FULL STRENGTH-PLUS
For Every Type of Freight Car



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Since their introduction many improvements have been made in the original design, and many new styles and sizes have been engineered and placed in production. The use of the hollow section for "light weight-full strength-plus," however, remains because of its higher efficiency and flexibility in design.

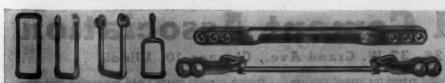
There's a Schaefer Connection for every type of freight car and engine tender—all described and illustrated in the new Schaefer Catalog. In your engineering, purchasing, stores and repair departments this catalog will prove a real time saver. Ask for a copy today.

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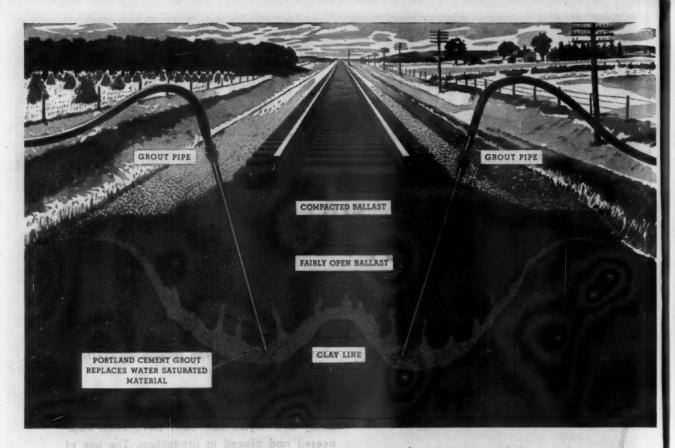
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Savings of thousands of dollars in maintenance, smoother riding track, and elimination of slow orders have resulted from pressure grouting of subballast on major railroads.

More than twenty major railroads are now using this simple, positive method of eliminating water pockets or soft spots and increasing the load-carrying capacity of troublesome subgrades.

In nearly every instance where pressure grouting with portland cement has been tried, the entire cost has been returned within a few months by savings in maintenance.

Write for copy of "Stabilizing Railroad Track by Pressure Grouting." Free in United States and Canada.

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A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

BUY AND KEEP MORE WAR BONDS

# Clear Track to our Railroad Customers

• America's railroads have for many years been regarded by The Glidden Company as preferred customers. Accordingly we have long been set up to render you a specialized, preferential type of service. And during the war our efforts and facilities toward this end have been considerably extended. We have "cleared the tracks" to give you the very best service possible.

The Glidden Railroad Technical Service offers a vast reservoir of practical "know-how" accumulated through

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THE GLIDDEN COMPANY . Cleveland 2, Ohio

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So said an executive at a railroad classification yard which has weighed 15 to 100 cars daily for 20 years with Streeter-Amet automatic weight recorders.

"To us," . . . continues the executive, "it means:

- 1. Continuous, speedy flow of our freight traffic.
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- 3. No unnecessary re-handling.

"About half our yard help is in the military service, and Streeter-Amet automatic recording has been terrifically important in offsetting the inexperience of help which makes for mistakes and subsequent argument and customer friction.

"Freight traffic is heavy and S-A speed of motion weighing has helped to maintain top service. Weighers can be handled without reduction of average speed between the hump and classification tracks."

"It all adds up to steamlined operation for us."

Streeter-Amet recording will weigh six to one ahead of hand weighing. It will cut operating costs, and improve general efficiency. Write today for a free engineering survey.

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"STREAMLINING" signifies fast movement. One of the most effective contributions to faster freight movement lies in dead weight reduction in rolling

Union Pacific has accomplished a worthwhile reduction of box car weight through the use of Youngstown Steel Sides. The car pictured here is one of 700 light weight automobile cars built before the war in the company shops. It has sides of Yoloy, Youngstown's high-strength nickel-copper alloy which permits a 22-23% weight saving.

If you are not yet familiar with all the desirable qualities of this high-tensile, low-alloy steel, let us acquaint you with the experience of other roads. Phone, wire or write us and your inquiry will receive our immediate attention.

This Union Pacific auto car is truly a "Streamliner" because truly a "Streamliner" because its weight is nearly 25% less than that of cars of the same size built of ordinary carbon steel.

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Accurate Dimensions
Cleanly Threaded
Uniform Strength



Oliver Track Bolts have the qualities you need for your track fasteners today. They are accurate in dimension, uniform in material, cleanly threaded. They fit right, pull up tight, hold firmly.

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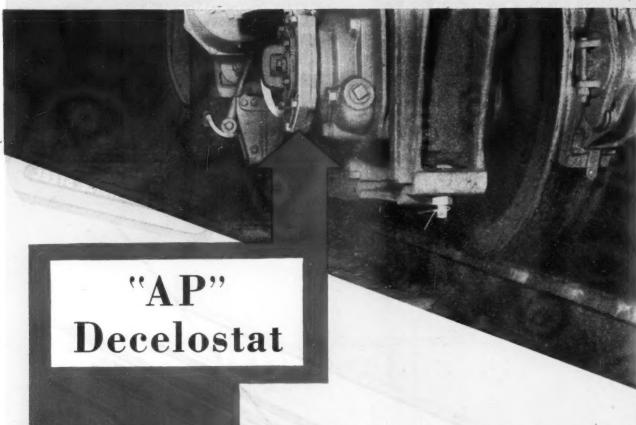
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Softens the Brake When Wheel Slip Impends

THE Decelostat is a sentry that is always at its post—on the wheel—ever on the lookout for irregularity in wheel-rail adhesion.

When brakes are applied it measures rate of retardation. If slippery rail is encountered the Decelostat won't let the wheel slip into a slide. It eases up on the brake, promptly—before the slide can develop. This is done in less than a second.

Braking pressure is softened—but only for the moment, and only on the affected wheels. Then the braking pressure is restored to the existing train level.

# Westinghouse Air Brake Company

Wilmerding, Pa.

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LWAY AGE

# Railway Age

With which are incorporated the Railway Review, the Railway Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

Vol. 118

June 16, 1945

No. 24

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# In This Issue

PARTICIPATION AND ADDRESS OF THE	
CAR RET	Page
Rejuvenates 85-Year Old Bridge Piers	1049
C. P. Disney, C. N. R. engineer of bridges, tells how plastic surgery and internal "shots," employing cement grout, give substructure of venerable Victoria bridge new lease on life.	
Virginian Achieves Pinnacle in Credit	1054
Discusses capitalization, debt reduction, property and territory of this railroad which has been operated from the outset with unusual singleness of purpose to provide transportation at lowest possible cost for West Virginia bituminous coal.	
Properties of High-Strength Steels	1056
Beginning a two-part article by Frederick D. Foote, president, Alloys Development Corp. Herein is given a balanced appraisal of characteristics of steels adapted for lightweight construction of freight and passenger cars.	
EDITORIALS	
Effectively Opposing National Socialism	1045
Need for "Staff Work"	1046
How the Tank Car Has Gone to War	1046
Involuntary Sabotage	1047
Safety Demands Identification of Trains	1047
Who's a "Saboteur"?	1048
GENERAL ARTICLES	
Rejuvenates 85-Year Old Bridge Piers, by C. P. Disney	1049
Truman Asks Americans Not to Travel	1052
Virginian Achieves Pinnacle in Credit	1054
Properties of High-Strength Steels, by Frederick D. Foote	1056
Blackhall Car Washer	1060
A Great Day Coming for the Railroads, by Wayne A. Johnston	1061
"Know-Your-Railroad" Forums	1062
RAILROADS-IN-WAR NEWS	1064
GENERAL NEWS	1071

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

FREIGHT OPERATING STATISTICS..... 1085



PRINTED IN U. S. A.



### The Week at a Glance

PULLMANS CUT 75 PER CENT: Travelers in mufti will soon be worrying along with 25 per cent of the Pullman space available to them up to now, and after July 1 it will be impossible "without some help" for a civilian to get space on a train to the West Coast. Such were some of the revelations on the seriousness of the travel situation made by Colonel J. Monroe Johnson to the press on Wednesday of this week. The reduction in the number of coaches available for civilian travel will be about 10 or 12 per cent. The W. P. B. this week put the entire freight car building industry (including manufacturers of essential specialties) on its "urgency list." These plants will now be additionally favored both as to materials and man-power. The W. P. B. acted on the information that the current car shortage is somewhat more than 10,000 cars."

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"REDEPLOYMENT" PREVIEW: The military load of passenger travel should reach its peak in December, but the zenith in military freight movement is not expected until next April—such are the Army predictions of what lies ahead for domestic transportation in relation to the "redeployment" of troops toward the Orient, in a statement reviewed in the news pages of this issue. The high point in the home-bound movement from Europe will come in August, when 400,000 troops should arrive at U. S. ports. The Army's estimates are given in terms of passenger equipment required, which indicate how little will be left for civilian travel.

SUPREME COURT VARIETY:V Some more 5-to-4 decisions by the Supreme Court as recast by the late President Roosevelt were handed down this week to the further bewilderment of the bourgeoisie. In one case a railroad settled a dispute with a union which was the authorized bargaining agent for a group of employees, whereupon individual employees demanded personal monetary damages on the contention that the union's power to bargain for them did not cover individual grievances; and in this novel argument the Supreme Court has acquiesced. In another case the Court suspended an order by the I. C. C. raising intrastate fares to the interstate level, asserting that this can be done only where, after listening to all the evidence, the Commission finds that intrastate rates are too low per se and not merely by comparison with interstate rates.

GRAIN MOVEMENT: The car situation for the grain crop isn't so bad—certainly not bad enough to justify the alarmist reports which have appeared in the daily press during the past week. Such was the information given by Colonel J. Monroe Johnson at an O. D. T. press conference on June 13. Up to June 2 the railroads had, this year, moved about 10,000 more cars of grain than in 1944. All the big grain roads have increased their loadings over last year by enormous percentages—the Santa Fe almost 90 per cent, for example. From February 19 to May 3 eastern roads delivered to western connections 94,000 more

box cars than they received. Box cars on central western roads were 114 per cent of ownership on June 1 this year, compared to 105 per cent on June 1, 1944. The colonel wouldn't go so far as to term the grain situation "lovely," but he hinted that he had other situations in mind which worried him more.

WHY CODDLE COMMUNISTS?: Do Americans deprecate force, cruelty, and crime only when perpetrated under the sign of the swastika, or are we paradoxically to embrace and fondle such viciousness when done under the emblem of the hammer and sickle? The leading editorial in this issue reminds us that there is little difference except terminology between the kind of rascality that the Russians label Communism and the parallel behavior which the Germans called National Socialism. There isn't any excuse for Americans to scorn the Teutonic monstrosity and cuddle up with its Slavic twin; or any excuse for treating promoters of the Russian brand of totalitarianism within our borders more gently than we dealt with the Nazi scoundrels who sought to foster Nazidom among us. Agents of foreign governments seeking to undermine our domestic institutions should be dealt with in the traditional

PRESERVING FREEDOM: To keep America free, it isn't enough just to scotch the militant enemies of freedom-the leaders of our private enterprise have the further duty to give the best and most loyal service they can to the institutions they profess to venerate. Specifically, our editorial suggests, this means that business generally should support the foresighted activity of the Committee for Economic Development; and that the railroads should get together on a far-seeing program for legislation and public relations, in conjunction with a program for physical rehabilitation and improvement. Such action by business and the railroads is needed if these enterprises are to make their maximum post-war contribution to general prosperity and useful employment. No defense of free enterprise can be so effective as a concerted effort to cause such enterprise to function at its hest.

LEARNING FROM THE ARMY: The railroads show a striking parallel to the Army in the complexity of their job. Both organizations, that is, embrace a wide variety of technologies and professionssubordinated in each instance to a specialized objective. But the Army makes more of a recognized effort than the railroads to bring the wide range of its activity into an integrated whole, by assigning thousands of officers who spend all their time on plans and integration. The Army doesn't leave the study of long-range objectives to the spare time of officers whose principal responsibilities lie in day-to-day operations; moreover it is the top staff administrators who direct the operating officers and not vice versa. An editorial in this issue on the railroads' need for "staff work" further explores Army and railroad parallelisms -

WHAT TO EXPECT IN STEEL: High-strength and corrosion-resistant steels evolved in recent years should not be expected to show exceptional development of any of their superior qualities. "Good enough" is as much as should be demanded, because superfluity in desirable properties also calls for superfluity in production cost. With this useful hint to thrifty and inquisitive users of steel, Alloys Development President Frederick Foote opens in this issue a carefully-considered exposition of the economic and technological factors entering into the wise use of the improved material for transportation purposes. The selection of an appropriate quality hinges on a careful scrutiny and balance of such factors as initial cost, resistance to corrosion and abrasion, ease of welding and forming, weight savings, and strength.

SANTA FE & ALLEGHANY WIN: The I. C. C. has decided to allow the Santa Fe to build a 2-mile extension to a connection with the port facilities at Long Beach, Calif. This proposal was opposed by competing railroads in the area. The Commission has also approved stock control of the C. & O., Pere Marquette, and N. K. P. by the Alleghany Corporation—but the latter corporation comes under I. C. C. jurisdiction and the group's holdings of the Pittston Company must be put in the hands of an independent trustee.

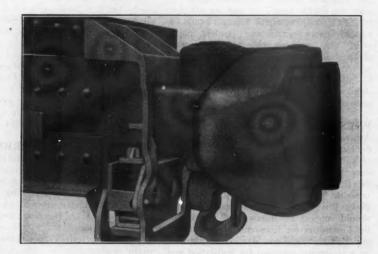
VICTORIA BRIDGE RENEWED: The Canadian National's historic old structure across the St. Lawrence at Montreal showed signs of weakness in piers and abutments, and these are being thoroughly renovated and strengthened by a detailed job of grouting, pointing and refacing. Bridge Engineer C. P. Disney of the C. N. R. describes this interesting and useful undertaking in this issue.

AN I. C. VIEW OF PROSPECTS: President Wayne Johnston of the Illinois Central, impressed by the railroads' resourcefulness in surmounting the depression and the war-traffic job, foresees in an address abstracted in this issue a favorable future for the carriers, if politics gives them anything like an opportunity to display their demonstrated vitality. What the railroads need if they are to thrive is traffic, and Mr. Johnston reveals why he is hopeful on this score. He expects a revolutionary improvement in railway methods and equipment; and calls for the cementing of a better understanding with employees.

THEY "KNOW THEIR R. R.": Encouraged by the popularity of a study course last fall for Boston & Maine employees under union-management-Y. M. C. A. auspices, in management-labor relations, the same sponsors have recently brought to a successful conclusion a second course, entitled "Know Your Railroad." An article herein describes the content and method of the course, and reproduces part of an examination paper written by one of the students at the program's close, giving concrete evidence of the successful absorption of useful information.

# CUSHION COUPLER CARRIER AND POSITIONING DEVICE

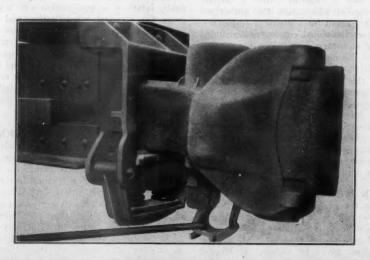
MAINTAINS STANDARD COUPLER HEIGHT WHEN CARS ARE UNCOUPLED AND PERMITS A VERTICAL VARIATION WHEN CARS ARE COUPLED TO TAKE CARE OF UNEVENTRACK OR LOW JOINTS, THUS CUSHIONING VERTICAL BLOWS ON COUPLER, CARRY IRON AND STRIKER.



SWIVEL BUTT APPLICATION

STRAIGHT SHANK APPLICATION

VORKS: NAMMOND, INDIANA



STARDARD RAILWAY EQUIPMENT MFG. COMPAN'

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### RAILWAY AGE

### Effectively Opposing National Socialism

It is significant that for years nobody in this country has been able to say anything in defense of Naziism or Fascism without risking prosecution, while the defense, advocacy and promotion of Communism as practiced in Russia have been and still are permitted with little criticism and no danger of government action.

It was a reasonable presumption that defenders and advocates of Naziism were directly or indirectly agents of Germany, and they had to be suppressed during the war with Germany. It is an at least equally reasonable presumption that some, if not many, of the promoters of Communism are agents of Russia. There is no question that the government of Russia formerly through the Comintern directed and financed activities in behalf of Communism in the United States and other countries. Ostensibly the Comintern has been abolished; but the evidence that the Soviet government is promoting Communism in all the countries that its armies have occupied is unmistakable. Furthermore, it is significant that not a word in criticism of conditions in Russia, or of anything that its government does, can be uttered or printed in the United States without numerous persons angrily trying to refute it.

Almost the only difference between Communism in Russia and Naziism and Fascism in Germany and Italy was that in Russia the government owned all property, whereas in Germany and Italy the governments treated all property as if they owned it. There was little choice between their dictatorships. They established and maintained absolutism by every form of force, cruelty and crime. Should we then treat promoters of Communism in this country as we formerly treated promoters of Naziism? Any American who accepts money directly or indirectly furnished by any foreign government to promote Communism or any other form of national socialism is a traitor and should be treated as such. No effort should be spared to refute Communist propaganda and to defeat legislation such as the Murray "full employment" bill (see Railway Age, February 10, 1945) tending toward establishment of national socialism.

But the best means of arresting the trend toward national socialism is that adopted by the Committee for Economic Development. This means is that of organizing business throughout the country (1) to educate itself and the public regarding the policies of government and business necessary to enable private enterprise to function with maximum efficiency, and (2) to stimulate private enterprise to exert itself to the utmost to cause large production and employment in the post-war period. The best answer to the claim that private enterprise has become a failure is to make it the greatest practicable success.

The railroads and every other industry must join in the struggle if the battle for private enterprise is to be won; and probably it will be won or lost within a few years. Therefore, Railway Age recalls what it said in an editorial in its issue of May 19, entitled, "The Railroads Need a Program." They need a legislative and public relations program. They especially need to adopt and announce a rehabilitation and improvement program such as they adopted in 1923. A definite rehabilitation and improvement program will give necessary support to their legislative and public relations program. And the early planning of an adequate rehabilitation and improvement program to be carried out as conditions permit will be the greatest contribution they can make toward safeguarding private enterprise in general, and especially in the field of transportation.

Efficiency ICTORY

### Need for "Staff Work"

Walter Lippman, in one of his recent articles observed of the State department, in effect, that it had suffered lately from being too much under the dominance of officers at the "operating level," so preoccupied with day-to-day problems that they lacked time, and perhaps also the inclination, to study and meditate upon long-term objectives and trends.

Whether such a conclusion with respect to the State department is accurate need not concern us here-but who would deny that parallel language might be used to describe with precision the situation of the railroads? Traditional railroad organization makes adequate provision for the forethought and planning necessary to vigorous inter-railroad competition but, aside from the recent and valuable activities of the "Fletcher committee." none of the major difficulties which have confronted the railroad industry as a whole in the past two decades has been foreseen in its true magnitude, to be met with a commensurate and timely strategy. The practice has been to temporize with these developments until they have reached unmanageable proportions, and then to try to counteract them with rear-guard and localized defensive tactics.

For example, the throb of the war drums calling the hostile tribes together for a concentrated assault on orderly rate-making was audible for years before the organized attack was finally launched—but each individual railway officer who heard this premonitory rumbling in his own bailiwick had no systematic means of knowing to what extent the warlocks in other jurisdictions were also thumping the tom-toms; and, anyway, he had a full quota of daily duties whose discharge left him no time for planning a counter-offensive.

Again, what concession has been made to railway unions in more restrictive working conditions, higher wages, and paid vacations but which, if proposed as a voluntary act on the part of railway management, would have been dismissed as intolerably expensive? Such concessions have, nevertheless, been made and the additional cost has been shouldered by the railroads; with the unions, however, and not the generosity of the railroads receiving the credit in the eyes of railroad employees. Time out from other managerial duties to do more long-range thinking on the subject of employee relations might not have saved the railroads much in their wage bill, but, under such an approach, they might at least have achieved greater employee loyalty and approbation as an offsetting reimbursement for the higher costs that they have had to accept anyhow.

The list of railroad troubles which might have been mitigated or altogether dispersed if they had been sensed and dealt with betimes could be drawn out interminably. The reason the railroads suffer from such difficulties so much more acutely than any other industry does not lie, as is frequently asserted, in a peculiar backwardness or lack of imagination on the part of railroad men, but in the fact that the railroad business is so much more complex than any other. What other industry is engaged in so many varieties of engineering work, with such a superimposed load of operating and production problems; to which are added legal, accounting, pricing, and selling complexities, each one of which is sufficiently

involved to constitute a distinct profession? What other industry is so minutely controlled by government at all its levels—national, state, and local? What other enterprise, except the telephone industry or the post office, comes into daily contact with so many people? What other industry is faced with such complicated unionism, strong but at the same time so diffusive?

The degree of foresight and studious observation necessary to the long-run successful management of such relatively simple, one-product, one-union, little regulated, and localized businesses as manufacturing or mining is just not sufficient for railroading. Spare-time planning may serve such industries well enough, but looking ahead for the railroads is too big and complex a job to be done in odd moments. The only enterprise comparable to the railroads in the variety of its activities and relationships is the Army. The Army has recognized its problem and has tackled it by an ever-growing expansion of "staff work." The Army, that is to say, has realized that such complex activities as it engages in cannot be well ordered without a large force of fulltime officers whose job is, not to do, but to study, observe, meditate, correlate, and plan; and such officers are not placed at a subordinate level but at the very top of the organization. The work done at the "operating level" is directed by those whose responsibility and opportunity it is to know what the long-run objectives are, and all the forces at work which may affect the attainment of those objectives.

It has been the well-done duty of the Pattons to win battles, but the supervision of the Pattons and the winning of the war has devolved upon the top administration, which has the facilities to view the conflict in its world-wide and detailed entirety.

### How the Tank Car Has Gone to War

Almost everyone is familiar with the record-breaking performance which railroads, in conjunction with private car companies and shippers, have attained with tank car equipment. Without the intensive and successful use of this type of car for handling petroleum products alone, it is safe to say that the war could not have been brought to a successful conclusion on the European front and progressed as well as it has in the Pacific. This statement can still be made and at the same time give full credit to pipe lines and all other transportation media available. The tank car is, in truth, a "steel soldier on the home front," as clearly established in a comprehensive paper on this subject which was presented by J. J. Root, Jr., vice-president of the Union Tank Car Company, at the May 15 meeting of the Car Department Association of St. Louis.

In addition to handling petroleum, tank cars lined with aluminum, nickel, rubber, zinc, lithcote, etc., which resist the corrosive action of lading or prevent its contamination, are rendering invaluable service in the transportation of special commodities. Many tank cars have been especially converted for handling component parts of 100-octane gasoline which is used in astronomic quantities. A single B-29 bomber, for example, is said to

consume one gallon of gasoline a second in taking off, fully loaded, and climbing to leveling-off altitude. In one 855-plane bomber attack on Bremen, Germany, only 900 miles round trip from an English air base, one million gallons of gasoline were burned. To meet such demands, 33½ million gallons of aviation gasoline a day are produced in this country. The total volume of petroleum and petroleum products loaded in tank cars amounted to 67 million gallons every day in the week.

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To accommodate this great traffic movement, Mr. Root's study indicates that approximately 167,000 tank cars, with capacities varying from 4,000 to 16,000 gal., are now operating in the United States, Canada and Mexico, of which about 75 per cent are used in transporting materials for war, and the balance materials essential for civilian needs. The present intensive use of tank cars is reflected in the fact that their total mileage has increased over 400 million car-miles a month, as compared with the pre-war year 1940.

Every spectacular achievement of any magnitude is almost invariably a joint effort, with more than enough credit for all concerned, which is decidedly true in this instance. Tank cars adapted and used for relatively slow short-haul service had to be suddenly conditioned for fast transcontinental schedules, and this work was done by tank car companies and railroads in spite of material and man-power shortages. The petroleum industry made a major contribution in providing increased loading and unloading facilities and releasing cars with minimum delay. The Association of American Railroads ably co-ordinated the efforts of individual railroads in securing the most effective maintenance practices and utilization of tank cars possible under arduous conditions. The Office of Defense Transportation, Office of Petroleum Administration for War, and War Production Board recognized the urgency of the need, and acted promptly within their respective spheres to help solve the broader problems of tank car demand and use. Primary credit must, of course, go to railroads for their notable work in safely handling vastly-increased numbers of tank car loads in symbol and mixed trains on faster schedules and with greatly reduced delays at all terminals. As a result of the combined efforts mentioned, the tank has become an outstanding tool of war.

### **Involuntary Sabotage**

There are a great many reasons for the startling increase in freight loss and damage of \$17,705,972 in 1944 as compared with 1943, representing a rise of 42.1 per cent. Freight house labor has been particularly hard hit by the draft, and inexperienced truckers and stevedores have been responsible for a large proportion of the increased damage. Large freight houses are, of course, necessarily situated in large cities where critical man-power situations have been at their worst. Despite the existence of many reasons for this unfortunate situation, the fact remains that this large loss really amounts to involuntary sabotage of war effort, and the seriousness of the situation should be realized by every railway executive.

Payments for unlocated damage to freight in packages increased \$8,449,030, or 44.9 per cent; losses of entire

packages increased \$2,148,951, or 73.2 per cent; concealed damage increased \$1,820,060, or 34.5 per cent; unlocated loss from bulk or packages increased \$1,013,402, or 65.5 per cent. While the losses from improper refrigeration or ventilation have not amounted to as much as the foregoing instances in money, they increased 314.5 per cent. Thefts of entire packages increased 124.6 per cent and thefts other than entire packages increased 132.5 per cent. The total freight loss and damage on carload shipments increased \$11,534,470, or 39.1 per cent, and on less than carload shipments the increase was \$6,171,502, or 49.3 per cent.

These figures and the more detailed statistics which are available on freight loss and damage are worthy of serious consideration. Obviously, in view of the large sums involved, curtailing of this waste is essential. The annual Perfect Shipping Month in April is a step in the right direction, but it should be supplemented by the efforts of the railways the year around. In war-time the dollar loss is subordinated to the loss of valuable, badly needed war-time freight.

# Safety Demands Identification of Trains

A recent collision on an eastern railroad, resulting in death to three employees and injury to six others, draws painful attention to the necessity for proper identification of trains at meeting points. In this accident, a southward first class train was given a train order directing it to meet a northward extra train at a blind siding. Upon arrival at the designated meeting point a northward extra train was observed in the clear on the siding and the first class train continued on past the station at normal speed. About 1½ miles south of this siding it collided with the extra train it had been directed by train order to meet.

Investigation by the Interstate Commerce Commission revealed that no surviving member of the crew had actually checked the engine number of the extra train standing in the side track, but that all had assumed it was the train named in the order they held. It was disclosed also that the conductor and the flagman were not even aware that their train had passed the meeting point. The fireman, the baggageman and the brakeman of the passenger train all saw the extra train in the siding and all said they were unable to distinguish the engine number, but that they assumed it was the train for which their train was restricted because the engineman of their train continued at normal speed. Since the engineman was killed in the collision, it could not be determined whether he failed to identify the train or whether he became confused as to his orders. In any event, it is apparent either that the surviving members of the crews did not understand the requirements of the rules and their responsibilities in the proper execution of train orders, or else that they were negligent-content to leave the entire task of seeing that train orders were fulfilled to the engineman.

Recent observation on other railroads leads to the conclusion that, on some lines, trainmen have been

permitted to form the habit of "going for the ride." This practice is certain to lead to repetitions of the accident described above. Where train operations are protected by block signals, identification of trains met or passed is necessary to avoid delays; but, where there are no block signals, as in this instance, identification is vital to safety. Operating officers responsible for train operation must know by personal observation that train and enginemen know and understand the importance of proper identification of trains met or passed; and, further, they must make certain that these employees act upon that knowledge.

### Who's a "Saboteur"?

C. Bedeil Monro, head of Pennsylvania Central Airlines, has "deplored recent testimony of railroad interests" in opposition to the program of airport development, to be financed by general taxation rather than by charges levied upon users of airport facilities. Such opposition by the railroads, "Commercial & Financial Chronicle" reports, is characterized by Mr. Monro as "an act of sabotage to the future of our entire national defense and a reprehensible blow at post-war employment."

There you have one of the hardy pioneers of private enterprise, 1945 model. He lacks confidence in the willingness of uncoerced customers to use plane service sufficiently to satisfy his ambitions, so he insists that the government intervene and ride herd on the taxpayers to whip up more trade for him than he would get onthe inherent economic merits of his product, with his prices forced to reflect total costs of his service. And he has so little belief that self-supporting and selfrespecting free enterprise can employ the available working force that he calls opposition to tax-fostered jobmaking "reprehensible." Why so many business men proclaim themselves opponents of the New Deal is rather mystifying, seeing how many of them-especially in aviation, waterways, and motor transportation-uphold economic doctrines and policies which are simon-pure New Dealism.

Mr. Monro's planes wouldn't be flying now and they won't be flying after the war unless there is an adequate railroad system to keep going the industrial production which supports this country's economic life and its military strength. Not Mr. Monro's planes, nor any other agency of transportation, can do the heavy industrial transportation job the railroads are doing—and still leave men and materials for other economic and military purposes. The railroads, in short, are at least as large an element in "our entire national defense" as planes.

The railroads were ready to make their indispensable contribution to national defense at no expense to the taxpayers, having prepared themselves entirely from the earnings they received from uncoerced customers. But, with payments from these voluntary customers as their only source of income, the railroads obviously cannot expect to continue their benefactions to national defense, if Mr. Monro and his kind succeed in inducing the government to use its taxing power coercively to herd many or most of these customers away from the railroads and onto Mr. Monro's planes.

The railroads have demonstrated that a transportation agency can be developed and supported, adequate to national defense, entirely from the earnings of voluntary commercial traffic. To promote a transportation service by taxation of non-users may gratify the greed of the interests surrounding that service, but such wetnursing from the public purse is clearly unnecessary to the development of the service to the full degree of the nation's need for it. The railroads have at no time opposed the development of aviation to the complete extent to which a genuine economic demand exists for such service, i. e., to the extent uncoerced customers are willing to support such a service by their purchases of it—but Mr. Monro does seek to prevent the railroads from attaining a development commensurate with their economic merits and with the demonstrated need of the national defense for railway service, because he wants the government to entice the railroads' customers away from them by subsidizing below-cost rival services by air.

The interest of the national defense in adequate transportation service is suffering "sabotage" all right—but it isn't the railroads who are the saboteurs. An inside job of sabotage is being done on the system of self-supporting private enterprise, too, and the railroads aren't the saboteurs there either.

### An Orgy of Public Spending?

Scarcely a day passes without new announcements of post-war spending plans not only by the federal but by local governments. After detailing some of the latter, the [Economic Bulletin of the National City Bank, N. Y.] finds that "the conclusion of the war threatens to let loose the greatest concentrated spending in the history of states and municipalities." The latter may discover that this spending is badly timed, that instead of bridging over a period of depression it will only compete unnecessarily with private employment. The state and city spending plans nearly all depend, moreover, upon the assumption of generous aid from the federal government. The federal aid policy ought to be re-examined in the light of the war debt now loaded on the federal treasury and of the vast improvement in the finances of states and municipalities.

The many state and federal spending projects are usually put forward on the ground that they will make jobs for returning soldiers. We must remind ourselves that they will also make taxes to be paid by those same soldiers, and perhaps create an inflationary rise in living costs with which these soldiers and their families will have to contend.

What we seem to be pointing toward is a level of post-war federal expenditures that may easily reach \$25,000,000,000, and even this figure may prove too low if government sponding and subsidies are looked to as a major reliance for reaching desired social objectives. How are we going to get the tax relief that is needed to stimulate post-war enterprise? How are we ever going to get the budget under control?

The bank puts forward the suggestion that in our thinking about post-war problems we are being influenced unduly by the memory of conditions in the Nineteen Thirties, when we were constantly contending with unemployment and striving to build up purchasing power.

-From the New York Times



The Victoria Bridge, Looking Toward Montreal from the Opposite Side of the River

# Rejuvenates 85-Year Old Bridge Piers

Plastic surgery and internal "shots", employing cement grout, give substructure of famous Canadian National Victoria bridge new lease on life

BUILT in 1854, and provided with a heavier and wider superstructure in 1898, the 24 cut-stone piers of the famous Victoria bridge of the Canadian National Railways over the St. Lawrence river have been reconditioned by an effective and economical method and will continue to carry dead loads two and one half times as great, and live loads at least seven times as great, as the original design loads. Weathered and ice-abraded facing stones are being replaced with Prepakt concrete, and the body of each pier is being solidified by pressure intrusion with a special grout.

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The bridge, with an overall length of 9,144 ft. and a length of 6,592 ft. be-

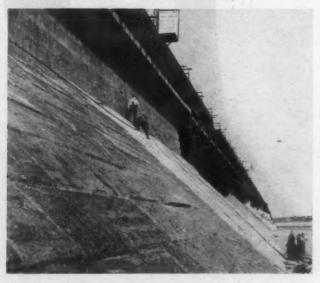
By C. P. DISNEY
Engineer of Bridges
Canadian National Railways
Toronto

tween abutment faces, crosses the St. Lawrence between Montreal and St. Lamberts, in the province of Quebec, Canada. At this point the river is swift and, although only 5 to 15 ft. deep in summer, at the breaking up of the winter ice it is deep and carries tremendous ice loads which sometimes overtop the piers. Also, heavy bed loads of boulders are transported by the current.

The bridge proper consists of 24 spans 242 ft. to 247 ft. long, and a 330-ft. span over the navigation channel. The original single-track railway superstructure was in the form of a series of rectangular tube spans, 16 ft. wide and 18½ to 22 ft. high, built of iron plates and weighing a total of 9,044 tons. In 1898-1899, when the bridge was about 40 years old, the superstructure was replaced with the present pin-connected trusses weighing altogether 22,000 tons. The present superstructure has an overall width of 66 ft. 8 in. and carries two tracks of the Canadian National on the bridge proper, between trusses; a single track of the Montreal South Shore elec-



Upstream Face of One of the Abutments Before the Repair Work Was Undertaken



The Same Abutment as That Shown at the Left After the Repairs Had Been Completed



Illustrating the Ice Conditions to Which the Piers Are Subjected During the Winter

tric railway, cantilevered from the downstream side of the trusses; and a twolane highway cantilevered from the upstream side of the trusses. At the time of construction of the wider superstructure it was necessary to widen the tops of the masonry piers and abutments; accordingly, both the piers and abutments were widened on the upstream side by building up the masonry vertically from the cut-water faces, without adding to the overall width of the substructure.

The piers and abutments rest on solid rock. They were built by laying up 5- to 20-ton blocks of limestone in lime mortar to form a coursed ashlar shell, which was filled with irregular stones, also laid in lime mortar.

Although the substructure, built nearly a century ago, has continued to carry the bridge, it has gradually deteriorated and has been under frequent observation and study for at least 20 years. In general, as might be expected, the ten piers in the middle of the river were in worse condition than those nearer the banks. The lime mortar had weathered from the joints and loosened the stones; in many places the vertical joints had become considerably widened by outward movement of the stones. In addition, water had penetrated the structure through the open joints, with consequent damage from freezing and spalling. Many of the stones contained shale intrusions, which were not only relatively

weak in themselves, but which absorbed moisture and expanded disruptively under freezing conditions. Some of the stones had disappeared entirely. Adding to these weakening influences, the piers were racked back and forth by the expansion and contraction of the steel trusses, in some cases sufficiently to split them, and at many points the surface stones were deeply abraded by ice. This combination of loose structure and disintegrated stones was considered sufficiently serious to require remedial measures. The cost of complete replacement of the piers would have been excessive.

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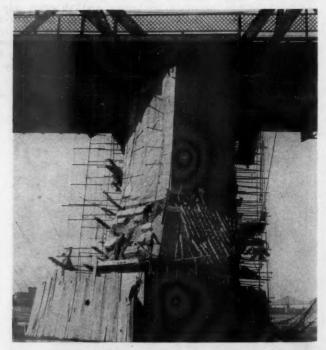
### Repair Methods

In 1941 after consideration of several alternative proposals, it was decided to employ the Intrusion method for solidifying the piers and the Prepakt-concrete method for replacement of disintegrated stones. Briefly, intrusion consists of pumping a special cement-sand grout into holes drilled throughout the masonry; the grout being designed to permit its being pumped into relatively small spaces without bleeding or plugging, and to set without shrinkage so that the spaces remain completely filled. Prepakt concrete is made by pre-packing a space with coarse aggregate and then solidifying the mass by intrusion; the use of pressure insures complete filling of the space and tight bonding with the adjacent structure.

Work on the Victoria bridge was begun in 1942, at the Montreal end, and has been proceeding progressively across the river, with the restoration of several piers in progress at the same time. As the repairs at a pier are completed, the



Downstream End of a Typical Pier Showing How Erosion, Disintegration and Cracking Had Taken Their Toll



Repair Work in Progress on One of the Piers. Note Safety Nets in Lower Right Hand Corner and Timber Shield for Protecting Diver in Foreground

equipment employed is moved ahead to the next pier on which work is to be started.

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The scaffolding being used consists of 34-in. wire cables with pipe sills, plank floors, and hand rails. It is hung from the bridge superstructure and extends entirely around each pier. The mixing and grout-pumping equipment at each pier is mounted on a platform slung under the bridge. Safety nets are provided for all operations.

#### Intrusion and Prepakt Used

After each pier has been examined carefully, the mortar joints are raked out and pointed. Holes are then drilled into the pier at intervals sufficiently close to insure that all joints, cracks and voids are filled without requiring excessive pressures which might dislodge the stones. Near the water line, holes are drilled diagonally downward through the pier to penetrate not only the pier itself, but also several feet into the un-derlying bed rock. The holes above the water line are generally drilled horizontally, and all holes are of such diameter that 134-in. grout pipes can be inserted to their full depth.

Connection of the pressure hose at each hole is accomplished by means of a special intrusion insert developed by the contractor. The sequence of intruding at the various holes and to various depths in any given hole is controlled to prevent the inclusion of water in the lower portions and to afford progressive checks on the thoroughness with which the spaces are filled. On the average, the volume of intrusion material pumped into each pier is about 12 per cent of the volume of the pier. In one pier, as much as 9,000 sacks of cement were used. Test holes drilled after intrusion and tested under pressure have given evidence as to the complete solidification of the structure.

A diver is employed to inspect the underwater intrusion. As the current is swift, and at some piers is as deep as 18 ft., a timber shield is placed just upstream from each pier to still the current and permit proper inspection. No caissons are being used at any of the piers.

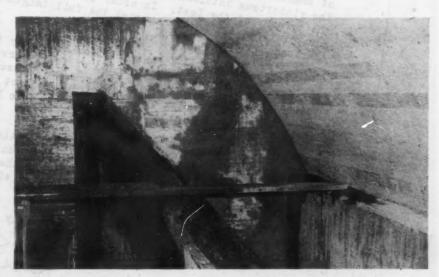
In restoring disintegrated facing stones, the unsound material is first chipped out to solid material, grid reinforcement is fastened in the cavity, a form is fastened over the opening, and the space is tightly packed with specially graded coarse crushed stone and then intruded to form Prepakt concrete. The finished appearance is shown in one of the illustrations. On the average, about 15 per cent of the facing stones are being re placed in this manner. In one pier, 230 blocks were replaced.

#### Hollow Abutments Restored

Abutments of the same exterior profile as the piers, with vertical downstream face and sloping upstream face, extend out from the bank for several hundred feet at each end of the bridge. These are



Supporting Arches of Hollow South Abutment Were Found to Have Sagged as Much as 12 In.



One of the Arch Rings in the South Abutment After the Repairs Had Been Made

being reconditioned in the same manner as the piers, by replacing disintegrated face stones with Prepakt concrete and by intruding the shell. It was found that the south abutment, which was thought to be solid, was actually hollow, being supported by a series of nine circular barrel arches of 27-ft. span. At the downstream face, each arch was closed in with a vertical stone wall 6 to 8 ft. thick, and on the upstream side each arch was enclosed by a longitudinal side arch which supported the sloping upstream face. Leaching of lime from the mortar joints of the arches had loosened the stones and caused the arches to sag, in some cases as much as 12 in. Many of the stones were broken.

Each of the arches was reconditioned by building a reinforced Prepakt-concrete arch directly under and in contact with the existing stone. The intrusion material, then applied, also penetrated the joints and crevices of the old stone structure and formed a monolithic whole. Each reinforcing concrete arch rests on

two reinforced concrete beams, one along each springing line and supported by four concrete pilasters, all of Prepakt concrete. The upstream side arch was also supported by Prepakt concrete, which, in turn, was supported at its upstream edge by a reinforced concrete

Restoration of the bridge substructure will be completed this year. With unsound facing stones eliminated, joints filled with cement mortar, and interiors solidified, the piers and abutments are undoubtedly being placed in better condition than they were at the time of their original construction; and they should serve for an additional period at least as long as that from construction to date. It is estimated that the total cost of the work will be less than one tenth that which would have been required to replace the piers and abutments.

The restoration work is being done for the railway by Intrusion-Prepakt Ltd., Toronto, Ont., Canada, under the

direction of the writer.

THE WHITE HOUSE WASHINGTON

June 7, 1945

The transportation facilities of the nation are now Dear Colonel Johnson: called upon for the most gigantic task in all the history of transportation. The American armies must be moved from the victorious battlefields of Europe to meet and wipe out the tyranny of the East. In order to do this job most of our soldiers will be transported the full length of the

It required every transportation ingenuity to assemble our armies in Europe over a period of four years. This time the job is to be done in ten months. The contemplation of this task would overtax our faith if we had not found during the course of this war that the impossible has become American continent. ing the course of this war that the impossible has become

I am asking you to extend my congratulations to all of our transportation agencies -- and their millions of workers-our daily job. on the results they have accomplished. At the same time express my confidence in them for the greater effort that lies Harry Hrusan shead.

Sincerely yours

Honorable J. M. Johnson

Office of Defense Transportation Director

Washington 25, D. C.

For war transportation as this to

the President, present this to

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### Truman Asks Americans Not to Travel

Commends the railroads, and Johnson presents his letter to this paper with endorsement for "distinguished service"

PPRAISING the transportation job ahead as "even bigger" than the "mirperformed by the carriers during the first phase of the war, President Truman last week called upon the public to "lend cooperation in order that the burden may be minimized." The President made his statement at a June 7 press conference, and he said in response to questions that he was prepared to establish travel rationing if it becomes necessary, although he hopes it will not.

Sleepers to Fade 50%-Mr. Truman's statement included a prediction that it will probably be necessary to reduce the sleeping car equipment assigned to regular trains by 50 per cent in order to obtain equipment for troop movements. "Thus," it added, "the various transportation re-strictions will not only be retained but undoubtedly increased. Those asking for relaxation of the restrictions are asking for the impossible."

Colonel J. Monroe Johnson, director of the Office of Defense Transportation, called on Mr. Truman at the White House on June 6, the day before the President's statement was issued. With the statement, the White House also made public the text of a letter the President had written to the O. D. T. director. The letter stated that the transportation facilities of the nation are now called upon for the most gigantic task in all the history of transportation." It went on to point up the job already done, adding that contemplation of the remaining task "would overtax our faith if we had not found during the course of this war that the impossible had become our daily job."

Congratulates Carriers-In closing the President asked Colonel Johnson to "extend my congratulations to all of our transportation agencies-and their millions of workers-on the results they have accomplished. At the same time express my confidence in them for the greater effort that lies ahead." For his own part, the O. D. T. director followed through from the President's appeal with a June 9 statement setting up a six-point voluntary travel curtailment program which, the O. D. T. press release said, "may avert the need for rationing at this late stage of the war."

As accompanying illustrations show, Colonel Johnson has endrosed a facsimile copy of President Truman's letter commending the carriers for the Railway Age, signalizing the publication for "distin-guished service"; and has transmitted this letter with a personal note to the editor.



#### OFFICE OF DEFENSE TRANSPORTATION

WASHINGTON, D. C.

Mr. Samuel O. Dann Bdi tor Railway Age 30 Church Street New York 7, New York

I am enclosing a letter from President Harry S. Truman, dated June 7, 1945, which well expresses the President's views with respect to transportation. To this I have added my official congratulations.

Your paper has well performed its important part in transportation, and I know of no better medium by which to extend the Fresident's appreciation and congratulations to the millions of railroad workers than through it.

Through the efforts of the transportation workers - all inclusive - from the youngest employes to the highest executives, the most gigantic task in all history of transportation has been, and will be, successfully accomplished.

To each individual who has rendered, and will render, service above the average, I add my sincere thanks to those of the President.

The full text of President Truman's press-conference statement follows:

All too few realize the transportation difficulties which are now developing and which will continue well into 1946. It is important that the public understand the situation and at once lend full cooperation in order that the burden may be minimized.

The transportation performance in mobilizing our victorious armies in Europe over a period of four long, difficult years required the utmost effort. The plan of battle now requires that our armies be transferred to the far Pacific in the very short time of 10 months. We must now complete in 10 months a task that is only one-third less than the previous job which required nearly 48 months. The transportation job in the first phase of the war has often been called a "miracle." The job ahead of us is even bigger.

The facilities for civilian passager transports.

in the first phase of the war has often been called a "miracle." The job ahead of us is even bigger.

The facilities for civilian passenger transportation will be greatly reduced. In order to obtain passenger equipment for troop movements, it will probably be necessary to reduce the capacity of sleeping car equipment on regular trains by 50 per cent. Men in uniform, other than on troop movements, now comprise about one third of the passengers on a regular train. If the number of these travelers in uniform remained constant, a 50 per cent reduction in sleeping car capacity on regular trains would mean that only one out of four of the civilians now using this equipment could do so in the future. But the number of travelers in uniform will be greatly increased.

In addition, war material moving to the Pa-cific will be more than twice as much as here-tofore. This tremendous increase must move over the Western railroads, which are already loaded

the Western railroads, which are already loaded to capacity.
Thus the various transportation restrictions will not only be retained but undoubtedly increased. Those asking for relaxation of the restrictions are asking for the impossible.

The situation requires the cooperation and self-denial of all users of transportation. The speed with which our men and munitions can be carried to within striking distance of Japan will largely determine how long the war must continue. I know that every American wants to add his effort to that of the millions of transportation workers on whom this grave responsibility rests.

bility rests.
Remember Remember, the returning soldier is here for a few days on his way from one conflict to another.

Local Meetings Ban?-In setting forth its six-point travel curtailment program, O. D. T. stated that it may soon be necessary to curtail local group meetings not now covered by the ban on conventions. Also that "if the need is indicated" formal restrictions will be imposed on large users of transportation, such as "sports, entertainment, commercial concerns and other enterprises." The six point program:

(Continued on page 1060)

## Virginian Achieves Pinnacle in Credit

Originally designed specifically to provide transportation at lowest practicable cost for West Virginia bituminous coal, company is one of most prosperous and efficient of American roads

RAVORABLE circumstances, combined with managerial foresight in the adaptation of the property's operations to these circumstances, have secured for the Virginian its position as one of the nation's most prosperous and efficient railways. More completely perhaps than any other large railway, the Virginian was originally conceived with a single important function in viewthat of maximum economy in the hauling of bituminous coal from the southern West Virginia coal fields to tide-water at Hampton Roads, Va.; and, even more remarkably, this one original purpose has been retained in the road's subsequent operations. The consequence has been that it has been unusually successful in obtaining its objective of lowcost transportation and favorable earnings, demonstrating the advantages to railroad efficiency where conditions permit the specialization which brings close harmony between railroad operations and the transportation characteristics of a predominant commodity.

The efficiency with which this railroad is operated is indicated by its operating ratio which, prior to the war, consistently has been about the lowest in the industry. Factors tending to make such a low operating ratio possible are dense traffic, electrification of a large part of the mileage operated and the heavy and large capacity equipment used, which latter is maintained in a high state

of repair.

#### High Investment Regard

The Virginian's credit standing ranks with the strongest of American railroad, industrial and utility enterprises. When the railroad sold \$60,000,000 of new first lien and refunding 3 per cent bonds to a banking group on April 24, its high investment regard commanded a price at

Table 1—Capitalization	n
FUNDED DEBT:	Outstanding
First and Refunding Mortgage Bonds, Series B, 3%, due May 1, 1995 Less: Held in company's treasury unpledged	\$69,544,000 9,544,000
Total Funded Debt*	\$60,000,000
CAPITAL STOCK:	
6% Cumulative Preferred Stock— Issued 1,118,200 shares, \$25 par Common Stock—Issued 1,250,860	\$27,955,000
shares, \$25 par	31,271,500

Total Capital Stock ...... \$59,226,500

Total Capitalization ..... \$119,226,500

\*The Virginian and the Norfolk & Western have guaranteed jointly the interest and principal of \$1,000,000 of first mortgage fifty-year 4 per cent gold bonds due May 1, 1961, of the Norfolk Terminal Railway.

The Virginian and seven other railroads have guaranteed jointly the interest and principal of \$350,000 of 1½ per cent serial notes of the Norfolk & Portsmouth Belt Line Railroad. Of these notes, \$70,000 mature each September 1 from 1945 to 1949.

competitive bidding of 105.669, an average annual cost to the railroad of only 2.79 per cent. This is probably the lowest interest rate ever received by a railroad for long term bonds. The bonds were considered attractive for reoffering to the public at 106.71, to yield approximately 2.75 per cent.

Both the company's bonds and stocks have been seasoned by a long period of consistent earnings and dividends, a summary of which for the past 10 years and first four months of 1945 is presented in Table II herein. Fixed charges have been earned more than three times in every year since 1936 and close to four times in four of these years. In addition to dividends on its 6 per cent cumulative preferred stock, the company has paid 10 per cent or more each year since 1937 on its \$25-par common stock. Even in 1932, the worst of the depression years, fixed charges were earned 11/2 times and preferred dividend requirements fully earned with a small balance for the common stock.

The company is using the proceeds from sale of its new series B bonds to retire the outstanding \$60,044,000 of first lien and refunding mortgage 334 per cent bonds, series A, due in 1966 at a premium of 6 per cent and accrued interest. A net saving of \$8,945,250 is expected from this transaction, exclusive of the effect upon taxes and a more rapid retirement of fixed interest debt.

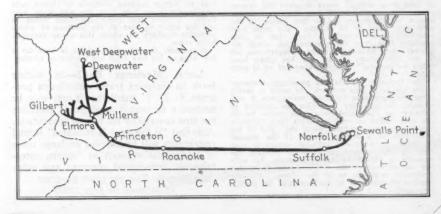
Another result will be that the total premium on redemption of the series A bonds, amounting to \$3,602,640, together with duplicate interest and other expenses of redemption, will be charged in 1945 to profit and loss and claimed by the railway company as a deduction in its 1945 federal tax returns. Excess profits taxes accrued by the company amounted to \$888,839 in 1944 and \$1,-288,115 in 1943.

#### Reduction in Debt

Capitalization of the railway as at May 1, 1945, giving effect to the present financing, is shown in Table I. After completion of the transaction, initial annual interest charges on the mortgage debt of the railway will aggregate \$1,800,000, a reduction of \$451,650 or about 20 per cent from interest charges immediately preceding the financing and a reduction of \$1,192,200 or about 40 per cent from those of March 1, 1936, immediately preceding the issue and sale of the series A bonds now being refunded. Total fixed charges for the first year after completion of this financing will be approximately \$1,800,000.

Between April 1, 1936, (immediately after the issue and sale of the series A bonds and December 31, 1944, the railway made gross expenditures of \$8,823, 440 for acquisition of rolling stock and \$8,873,435 for other additions and betterments, in addition to advancing \$3,-297,209 (of which \$475,344 has been repaid) to its subsidiary, the Loup Creek Colliery Company, for purchase by the latter of coal lands. During this period the railway also retired \$2,340,000 of equipment trust certificates, \$300,000 of series A bonds and \$5,000,000 of short term notes issued at the time of the sale of the series A bonds, a total debt reduction of \$7,640,000. The new series B bonds will have a contingent sinking fund under which it is calculated that if all sinking fund payments are made about 75 per cent of the bonds will be retired by their maturity 50 years hence.

The company was incorporated in Vir-



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ginia on February 20, 1904, as the Tidewater Railway Company, the name being changed to the Virginian on March 8, 1907. It is the smallest of the Pocahontas bituminous coal carriers, operating 657 miles of road (30 miles double-tracked), of which 333 miles are in Virginia and 324 miles are in West Virginia. Of the mileage operated, 593 miles of main line and branches are owned and 64 miles used jointly under trackage rights. Industrial spurs, sidings and yard tracks aggregate an additional 386 miles, bringing total tracks operated to 1,073 miles.

The main line extends from Sewalls Point, on Hampton Roads, Norfolk, Va., 442 miles in a northwesterly direction, passing through Roanoke, Va., and the bituminous coal fields of southern West Virginia, to a connection with the Ohio Central Lines of the New York Central at West Deepwater, W. Va., and with the main line of the Chesapeake & Ohio at Deepwater, W. Va. A 44-mile branch line extends from Elmore, W. Va., westerly along the Guyandot river to Gilbert, W. Va., to connections with the C. & O. and the Norfolk & Western. Fourteen other branch lines, aggregating 107 miles, extend from connections with the main line and certain branch lines and serve territory areas of the southern West Virginia coal fields. There are numerous connections with other rail-

#### Mileage Partly Electrified

There are 138 miles electrified—the main line between Roanoke and Mullens, W. Va., approximately 133 miles, together with a short portion of the Winding Gulf Branch beginning at Mullens. Power is obtained from the company's generating plant at Narrows, Va., on the north side of New river. Electric operation between Mullens and Princeton began in September, 1925, and operation through to Roanoke was inaugurated in September, 1926. The installed capacity of the plant is 4-12,500 kva., 25-cycle, turbo-generators, with five water tube boilers, each rated at 1,521 b.h.p., with space provided for a sixth boiler. Pulverized coal is used for fuel. In 1924, to provide emergency protection of the electric power supply of both roads, the Norfolk & Western and the Virginian constructed a 88,000volt, single circuit, tie line, connecting the Bluestone, W. Va., power plant of

the N. & W. with the transmission lines of the Virginian near Matoaka, W. Va. The tie line station at Matoaka is the property of the Virginian while the tie line is jointly owned.

#### **Tidewater Facilities**

The Virginian owns extensive tidewater terminal facilities at Sewalls Point. The properties embrace 506 acres of waterfront property, of which about 161 acres are leased to others. The terminal includes a modern steel, electrically operated, high-level, coal loading pier, 1,074 ft. in length, with a capacity to load 7,200 tons of coal per hour into vessels; and a steel, electrically operated, low-level, coal loading pier, 1,045 ft. in length, with a capacity to load 2,500 tons of coal per hour into vessels. The piers are provided with elevators, car dumpers and electric conveyor cars. The terminal also includes 2.5 miles of first main track, about a mile of second main track, 5 miles of industrial track and 60 miles of yard track and sidings.

The Virginian owns all the capital stock of the Loup Creek Colliery Company, which owns 59,000 acres of developed and undeveloped coal lands in Fayette, Wyoming, and Boone counties, W. Va. There are five mines on its properties (not including four wagon mines) under leases covering an aggregate of 25,733 acres of coal lands, all of which are served by the railway. During 1944 the Loup Creek Colliery received \$184,907 in rents and royalties under these leases. On December 31, 1944, the Colliery Company owed the Virginian on open account, \$2,821,866 for advances.

During 1944 there were 61 active coal mines (not including wagon mines) on the Virginian's main line and branches. Of these, 25 were served jointly with the Chesapeake & Ohio and one with the Norfolk & Western.

Bituminous coal tonnage originating along the lines of the company during the past 10 years averaged about 94 per cent of the total bituminous coal it handled.

Important movements of coal are eastbound to tidewater at Hampton Roads; eastbound to inland points; and westbound via connections. At Hampton Roads the tidewater tonnage is loaded into vessels for trans-shipment. Of this tonnage in 1941 (the last year before the interruption of the normal flow of tidewater coal traffic by this country's entry into the war), about 64 per cent moved to New England, 31 per cent to other coastwise destinations, and 5 per cent to miscellaneous destinations. Inland eastbound tonnage moved chiefly to the District of Columbia and points in Virginia and North Carolina. About 26 per cent of the westbound movement in 1941 consisted of lake cargo coal and about 74 per cent of coal moving all-rail to consuming markets, chiefly in Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin.

#### Coal Tonnage

During the years 1935 to 1940, inclusive, the Virginian's coal tonnage averaged about 90 per cent of its total tonnage and made up 83 per cent of total operating revenues. During that period tidewater coal tonnage averaged 43 per cent of total coal tonnage and revenue derived therefrom averaged 64 per cent of total coal revenues and 53 per cent of total operating revenues. Beginning in 1942 tidewater tonnage and revenues decreased substantially and inland east tonnage and revenues increased—due to the diversion of tidewater tonnage to allrail routes, which was necessary because a considerable part of the coastwise coalcarrying fleet was diverted to other uses and because of enemy submarine activity off the Atlantic coast.

Total coal tonnage has not increased materially since 1940 despite a large increase in demand for coal due to industrial activity incident to the war. In an attempt to meet this demand, mining operations are now generally on a six-day week compared with the five-day week in effect prior to the war, but coal stocks above ground have been reduced. The Solid Fuels Administration has issued directives to coal operators to ship coal to specified consumers and has issued other regulations relating to the distribution and consumption of coal which have tended to interrupt the normal flow of traffic.

Since the end of the European war tidewater coal tonnage is gradually resuming its pre-war proportion of the company's coal business. The government is constructing 22 modern bulk carriers and it is expected that a fleet of eight will be available for the coastwise coal trade within the next few months. These vessels, some of which have al-

(Continued on page 1059)

#### Table II-Summary of Earnings\*

First Four Months 1945	Operating Revenues \$10,406,299 10,252,719	Operating Expenses \$6,373,922 5,564,663	Operating Ratio % 61.25 54.28	Net Revenue from Railway Operations \$4,032,377 4,688,056	Net Railway Operating Income \$2,697,236 2,461,754	Income Available for Fixed Charges \$2,743,309 2,497,221	Fixed Charges \$756,625 756,323	Times Fixed Charges Earned 3.46 3.32	Net Income \$1,986,684 1,740,896
Years 1944 1943 1942 1941 1940 1939 1938 1937 1936 1935	\$29,169,161	\$17,234,294	59.08	\$11,934,867	\$7,118,417	\$7,276,528	\$2,251,992	3.23	\$5,024,536
	27,300,864	14,739,202	53.99	12,561,662	7,488,015	7,699,382	2,252,256	3.38	5,357,126
	26,523,147	13,296,410	50.13	13,226,737	7,369,757	7,458,639	2,322,506	3.21	5,136,133
	27,837,329	12,435,300	44.67	15,402,029	8,788,896	8,905,985	2,327,333	3.83	6,578,652
	25,645,904	11,646,440	45.41	13,999,464	9,675,197	9,772,087	2,494,175	3.92	7,277,912
	21,476,933	9,953,297	46.34	11,523,636	9,028,510	9,011,210	2,348,481	3.84	6,662,729
	19,268,060	9,607,782	49.86	9,660,278	7,879,135	7,810,071	2,371,666	3.29	5,438,405
	20,181,642	9,060,041	44.89	11,121,601	9,436,413	9,422,345	2,415,564	3.90	7,006,781
	17,640,017	7,865,820	44.59	9,774,197	9,068,263	9,094,412	2,642,713	3.44	6,451,699
	15,783,550	7,178,908	45.48	8,604,642	7,223,154	7,261,960	3,118,623	2.33	4,143,337

<sup>\*</sup> Virginian Railway and subsidiary, Loup Creek Colliery Company.



Dead Weight Required to Resist Corrosion Adds to the Rust Pile

## Properties of High-Strength Steels

A balanced appraisal of characteristics adapted for lightweight construction of freight and passenger cars — Corrosion resistance and physical properties

#### Part I

A N official terminology for the group of steels which are basic in this discussion is desired at the outset and found wanting. The term "corrosion-resistant high-strength steel" is preferred by the author, but for the sake of brevity "high-strength steel" will be used in this discussion.

A large steel producer, who pioneered one of the earliest and best of these compositions more than a decade ago, has promulgated a definition which specifies the following: "The term low-alloy highstrength steel is meant to include steels to which moderate amounts of alloying elements have been added, imparting in the as-hot-rolled conditions a yield point of 50,000 lb. per sq. in. minimum in sections ½ in. thick and lighter, and which experience indicates will result in atmospheric-corrosion resistance four to six times that of mild steel."

A minimum degree of several important properties must be possessed in a composition suitable to the purposes for which this group of superior steels was designed. Otherwise, it would be inadequate to serve engineering needs in some one or more respects and would, therefore, be disqualified. In considering this subject it is sometimes illuminating to point out that this group of steels was developed to displace ordinary structural steel for many important uses in large tonnage markets. If the group is thought of as comprising better grades of ordinary steel which have resulted

By FREDERICK D. FOOTE
President, Alloys Development Corp.

from metallurgical progress and advancement in the art of steel making, a good bit of the mystery and confusion which surround them will be avoided. Too frequently some one of the essential properties of a high-strength steel is over-emphasized and thus given a degree of importance out of proportion to its rightful place in the overall engineering problem. Gratifying as it would be to find a material ideal in all of its characteristics, no such happy outcome is expected by metallurgists and engineers of a practical turn of mind. It seems wise, therefore, to consider the homely adage that "good enough is the best" that anything more than an adequate degree of each of the several properties essential to the purpose is superfluous and can be obtained only by adding to cost, in one way or another.

The over-emphasis which is placed upon the importance of one property when compared with another arises at times from a desire for a fool-proof degree of some characteristic in the material, without regard for a proper balance of other essential properties. Thus, a welding engineer would mark adaptability for welding as his criterion of quality; the boss of the fabrication shop, forming characteristics; a maintenance

engineer, corrosion and impact resistance, and so on to the purchasing agent who sometimes in the past has played down quality considerations in favor of price. Since all must be concerned with an integrated balance of the several properties essential to a given purpose, it is reasonable to discuss the characteristics of these steels from the standpoint of their utility for the particular services in which they are to be used.

The aim of this discussion is to examine the characteristics of high-strength steels well qualified for the construction, in modern lightweight design, of mobile structures used in transportation, such as railroad freight and passenger cars, street cars and buses, mine and dump cars, trucks, truck bodies and trailers, ships and barges, etc. First costs, operating costs, and service performance will determine the choice of material best suited for the design of such structures. By this method of selection, corrosion and abrasion resistance, and what may be referred to descriptively as toughness, are of first consideration. Adaptability for welding and forming must be possessed in an adequate and satisfactory measure, but if the utmost in weight saving for low-cost operation is the chief objective, a structure when built and placed in service must be able to "take it" in terms of day-to-day punishment and to keep on taking it over its economic life span, without gradual loss of essential strength and premature failure due surance lightweig materials gree of a and, hen the most erties ess

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fresh sisted 1 adheren sistant with th rosion type of surface so that be mad adhere ent fro many resista above and, he

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Railwa

ure due largely to corrosion. This assurance cannot be provided in modern lightweight design without employing materials which possess a marked degree of atmospheric corrosion resistance and, hence, it is contended that this is the most important of the several properties essential in a high-strength steel.

#### The Protective Rust Coat

Service experience, as well as an exhaustive amount of testing, has demonstrated clearly that the superior atmospheric corrosion resistance of certain high-strength steels is due to the more dense, tightly adherent, and highly pro-tective rust coat which forms on their surfaces. It has been found that under the usual atmospheric testing conditions about two-tenths gram per square inch, or about two-thousandths of an inch in thickness of the better corrosion-resisttant steels, is used in supplying the metal required to form a good protective oxide film. A period of exposure of at least two years, preferably longer, depending upon the alloying elements employed, is required to ascertain the trend in the probable atmospheric corrosion-resistance behavior of a high-strength steel.

One particularly important characteristic of the type of rust coat which forms in the atmosphere on the subject steels is its uniformity. It is practically free from spalling and from the formation of tubercules or warts of rust which aggravate pitting and cause corrosion to progress steadily. The seriousness and magnitude of the spalling found with plain carbon or copper-bearing steels may be visualized by the fact that over a short period of years a car shop, which specialized in heavy repairs to steel cars, accumulated several thousand tons of scale which it used as fill in a swamp, and later, when a market for iron oxide developed, it also sold several thousand tons as "iron ore."

Tendency to spalling, which exposes fresh surfaces to the weather, is resisted by the relatively thin, tough, and adherent rust coat of these corrosion-resistant steels. To those who are familiar with the electrolytic nature of the corrosion processes, the advantages of this type of scale will be apparent. Paints, surface preparations for painting, and methods of paint application are varied so that no quantitative statements can be made as to the longer life and greater adherence of paint on the surfaces of these steels. However, it seems apparent from the paint performance on the many freight cars built from corrosionresistant steels that the facts referred to above do contribute to greater adherence and, hence, longer life of the paint.

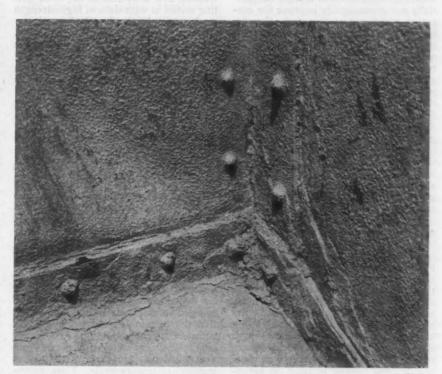
#### **Elements of Resistance**

If we examine first the influence of the individual elements on the atmospheric corrosion resistance of a ferrous material, we find that some are definitely beneficial when used alone; some slightly so, and others negative in their effect, or even harmful. These same elements, when used in combination, are sometimes surprisingly beneficial and in a manner not to be anticipated by their effect upon corrosive resistance when used alone. In other words, the corrosion expert has found that sometimes two and two make five.

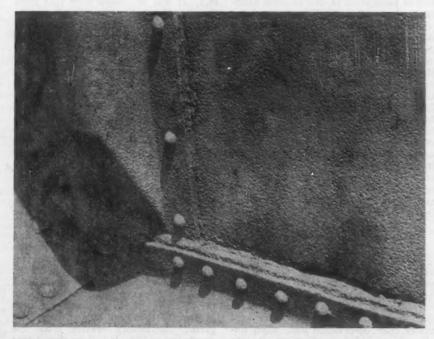
There are several reasons for using more than one alloying element to produce the physical properties of a good high-strength steel, and this turns out to be a favorable circumstance in regard to corrosion resistance. For instance, phosphorus, which is probably the most

effective element for improving atmospheric corrosion resistance when used alone, is even more beneficial when used with small amounts of copper. As another example, chromium is not a potent corrosion inhibitor when used alone in amounts under 2 per cent, but when added to the combination of phosphorus and silicon a marked improvement is noted. Similar phenomena are obtained with nickel in various combinations, particularly with copper.

In the range in which the above ele-



Typical Spalling and Scaling of Corrosion Products in a Copper-Bearing-Steel Hopper Car



Dense Scale-Free Corrosion-Resistant Surface on a 10-Year Old 3/32-In. Cor-Ten Steel Hopper-Car Side Sheet—This Sheet Has Lost 0.006 In. in 10 Years

ments can be used to make a satisfactory high-strength steel, the previously mentioned formation of a protective type of rust coat will prevail approximately in the following type compositions: Cr-Si-Cu with P; Cr-Ni-Cu with P; Mo-Si-Cu with P; high Cu (34 per cent) high Ni (1½ per cent).

combination of relatively small amounts of the alloying elements in some steels of this character provides a highly protective oxide coating at low cost. Increasing the amount of the alloys in these combinations will neither substantially nor economically improve the corrosion resistance of the steel. Copperbearing steel (.20 per cent copper minimum) is recognized as having an atmospheric corrosion resistance about two times that of plain steel. The best of the high-strength steels have an atmospheric corrosion resistance two to three times that of copper-bearing steel. Since it is generally not practical nor desirable, for reasons of economy and good working characteristics, to employ the corrosion-inhibiting elements for their maximum effect, the compositions best suited to the purposes discussed are those which have a proved atmospheric corrosion resistance four to six times that of plain carbon steel.

Corrosive conditions are variable throughout the applications of steel, being much more severe in a railroad hopper car than in a box car, for exam-While service performance is the ultimate proof, it cannot be had when the intended application of high-strength steel is a new one. An engineer must, of necessity, draw upon such other knowledge as may be at hand. When one of the outstanding high-strength steels was introduced in 1933, there was made available a steel which, by careful testing, was proved to have an atmospheric corrosion resistance of the degree referred to; namely, four to six times that of plain steel, or two to three times copper-bearing steel. This was a composition whose relation to copper-bearing steel, as regards atmospheric corrosion resistance, was the same as that existing between copper-bearing and plain steel. The question then arose as to the probable performance of this steel in railroad hopper-car service, this being the type of equipment used principally for the transportation of coal. Reasoning from the demonstrated comparison of the corrosion-resistance of plain and copper-bearing steel in such equipment, it was concluded that the subject highstrength steel would have a corrosion resistance in actual service equal to one and one-half times that of copper-bearing steel.

#### Hopper Car Performance

In support of the above conclusion, reference can be made to the service performance of a series of hopper cars built with plain steel in one-half of each car body, and copper-bearing steel in the other half. These cars were kept under close observation and, when finally they needed overhauling, it was found that the copper-bearing steel had

a corrosion resistance which provided a service life 40 to 50 per cent longer than that of plain steel. In other words, a superiority in the atmosphere of two to three times was reduced to one and one-half times under the service conditions to which these cars were subjected over a period of years.

A striking example of the superior service life to be expected from corrosion-resistant steels, when compared with ordinary carbon steel, was afforded by an accident which, in 1936, resulted in a stray slab of the latter getting mixed in with slabs of high-strength steel and inadvertently rolled into intermediate slope sheets for hopper cars. A little over six years later the nine sheets which were rolled from the stray slab failed and had to be replaced. The facts in the case were proved by tracing the material and determining its chemical analysis to be that of plain carbon steel. The high-strength-steel sheets in this series of cars are still in satisfactory condition after having been in service for approximately ten years.

#### Selecting Sheet Thickness

Where corrosion is a controlling factor in determining thickness, the substitution of high-strength steel on the basis of strength alone is not in order. A method for combining the two requirements is suggested. The side sheets of a hopper car, which are ordinarily of %16-in. thickness in plain copper-bearing steel, may be taken for examination. At the end of their useful life, they are reduced in thickness to such an extent that the remaining steel no longer has sufficient strength, and failure cracks appear. The remaining thickness is not great, and .04 in. will be used for the purpose of this example. Thus, corrosion has removed .1475 in, of steel from the original thickness of .1875 in. (%)6 in.). It will be shown later that from the standpoint of strength, the highstrength steel will permit a reduction in weight of about 25 per cent. It is not necessary to know what combination of stresses (or their actual amounts) existed in the copper-bearing steel at failure. If it was found to occur at a thickness of .04 in., the strength properties of a good high-strength steel would permit it to hold out until reduced to .03 in. in thickness.

Next, the fact of corrosion resistance should be examined. Using the comparative factor given above of 11/2 for the corrosion resistance rate of the highstrength steel with respect to copper-bearing steel and applying it to the .1475 in. thickness removed from the copper-bearing steel, a required thickness of .0983 in. is obtained. Adding this to the .03 in. obtained from the strength calculations gives a total required thickness of .1283 in. Admittedly, this is an approximate approach to a difficult problem to solve, but it leads to the thickness of 1/8 in. which was used in several thousand hopper cars now giving satisfactory service from the standpoint of life. It will be shown that this reduction of 331/2 per cent (% in. thickness reduced to ½ in.) is well in line with the most favorable reduction made possible by the strength factor alone.

A most important conclusion to be drawn from the preceding discussion is that thickness reductions of this order are valid only if the corrosion resistance of the high-strength steel is one and one-half times that of copper-bearing steel in hopper-car service. Any ratio less than this would require the thickness to be increased, and thus reduce the weight saving.

The corrosion attack to which opentop railroad equipment is subjected is due almost entirely to the pollution of the air in industrial areas by sulphur gases. This fact is borne out by the service history of the equipment. It is confirmed also by the proved increase of 60 per cent, approximately, in service life obtained from copper-bearing steel compared with that of plain steel. No other property of plain steel was affected by the addition of .20 per cent copper than that of its degree of corrosion resistance.

The concentrated leechings of highsulphur coal are extremely damaging to
steel of any composition. If the service
requirements of railroad equipment include the storage of high-sulphur coal
in open-top cars for periods of thirty
days or longer, these leechings would
be given time in which to concentrate
and then cause a greatly accelerated rate
of corrosion of the surfaces of the steel
and also a piercing type of corrosion at
points where the lumps of coal came in
contact with the sheets. This latter form
of corrosion would cause penetration
through the sheets of the cars in a very
short time.

#### Service Life

That no such condition is a serious factor in railroad service is again demonstrated by the useful life of ten or eleven years obtained from the sheets of coal cars of plain carbon steel and of fourteen or fifteen years in copper-bearing steel. It should be noted that this service life is again in the ratio of the corrosion-resistance factors mentioned of 1:1½ for the two types of steels, respectively, when employed in equal section

Moreover, the best high-strength steels are proving their superior life to be in the ratio of their added resistance to atmospheric corrosion when compared to plain carbon and copper-bearing steels. Thus, the ratio of service life in equal section of plain steel, copper-bearing steel, and high-strength steel is, respectively, 1:1½:2½.

The most highly polluted atmospheres are found in industrial areas. Atmospheric corrosion attack is much more severe in these areas than in rural areas. Also, corrosion attack is accelerated by maritime atmospheres, but not to the same extent as by industrial atmospheres. In support of the findings of corrosion experts in this country, the following excerpts from a report made by Dr. J. C. Hudson of the Corrosion

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Committee of the British Iron & Steel Institute will be found interesting:

'The exposure station (for test specimens) at Sheffield is situated in the heart of the industrial district and the atmosphere there is very corrosive. By this standard the corrosion rates at other

home stations are low. . . .

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"Other industrial atmospheres, Motherweld, Redcar and Woolwich, are only half so corrosive as Sheffield. Here, although the atmospheres are correctly described as industrial, the actual sites were situated on the fringe of the industrial activity rather than in its center, in a zone where, as is frequently the case, there is a rapid transition from industrial plant to open country.

"Corrosion in the marine atmosphere of Calshot was less than 40 per cent of that at Sheffield. Since the specimens were exposed at the edge of the spit and were exposed at times to salt spray, it may be concluded that, although proximity to the sea may lead to severe corrosion in certain cases, in general, sea salts are not so corrosive as the markedly acid conditions which result from severe industrial pollution of the atmosphere, chiefly by sulphur compounds.

"It may be concluded from the above that, as a rule, straight-forward corrosion of iron and steel should not be marked in non-industrial atmospheres, and that the primary cause of severe corrosion is industrial pollution."

#### Physical Properties

The physical properties of the highstrength steels may now be examined. Ordinary structural steels have long held a prominent place in the construction industries, and naturally form a basis against which to evaluate the performance of the high-strength steels. It is pertinent, therefore, to compare the physical or mechanical properties of

portance to the general design practice of basing unit working stresses upon the yield point, the point beyond which permanent deformation occurs.

The working unit stress is determined by dividing the yield point by a factor of safety. Every-day methods of stress analysis are not exact as they seldom include the calculation of secondary stresses, the influence of stress concentrations, and accidental overloading of the structure. Long experience with ordinary steel has determined a certain factor of safety which produces satisfac-tory results. The factor varies for different classes of structures and the higher its value, the greater would appear to be the uncertainty of the true state of stress existing within the struc-

#### Strength Values

The strength values given in the accompanying table are derived from tensile tests and, therefore, are directly applicable to tension members. In general, it may be assumed that the factor of safety in use for the application of ordinary steel to the structure under consideration will be satisfactory for a highstrength steel. For example, if the working unit stress in tension is 16,000 lb. per sq. in. for ordinary structural steel having a yield point of 33,000 lb. per sq. in. (the commonly accepted value for structural steel and the middle value for Grade A structural steel for cars) the factor of safety is 33,000 ÷ 16,000 = 2.06. Applying this factor to the yield point of 50,000 lb. per sq. in. of a highstrength steel a working unit stress of  $50,000 \div 2.06 = 24,300$  lb. per sq. in. which would be rounded to 24,000. It should be pointed out here that under Grades A and B of the A. A. R. specifications for structural steel for cars yield points as low as 30,000 lb. per sq. in. in

lems of design encountered in utilizing the weight-saving potentials of the properties of high-strength steels.—EDITOR]

#### Virginian Achieves

(Continued from page 1055)

ready been delivered, will have a capacity of 8,000 to 10,000 tons of coal.

The road's merchandise tonnage and revenues have increased substantially during the war, due in large measure to government traffic. Passenger-train revenues, including mail and express, amount to less than 1 per cent of total operating revenues. In 1944 total operating revenues of \$29,169,161 included \$20,432,379 freight-coal and coke; \$7,-604,834 freight-other; \$206,016 passenger, mail and express; and \$925,932 all other.

According to estimates by independent mining engineers, at the beginning of this year there was a total of 1.9 billion net tons of coal along the railroad's lines including 1.6 billion net tons of low volatile coal and 300 million tons of high volatile coal. Potential shipments over the Virginian totaled 1.5 billion tons, including 500 million tons from developed reserves and 1 billion tons undeveloped. At the road's maximum annual rate of 13.5 million tons, these reserves will provide tonnage for more than 100 years.

#### Standards of Roadbed

Improvements and additions to the road and its equipment have been made with the objectives of developing the coal traffic and handling it in the most economical manner. Standards of roadbed and track construction are rugged and adequate. The bridges are of Coop-er's E-60 and E-75 rating and are sufficient for the heavy locomotives and

cars operated.

Weight of rail is heavy. The main line from Sewalls Point to West Deepwater, with the exception of about five miles through the yards at Sewalls Point, Victoria and Roanoke, is laid with 130- and 131-lb. rail. Of some 151 miles of branch lines, 18 miles are laid with 131-lb. rail, 105 with 100-lb. rail and 28 with 85-lb. rail. At the end of 1944, 93 per cent of the ties in all tracks were creosote treated. All ties in main and branch lines, and most in other tracks, are equipped with tie plates. The main line and branch lines are ballasted

with crushed stone.

#### Equipment Owned

On December 31, 1944, the company owned outright (there are no outstanding equipment trusts) twelve electric freight locomotives, 95 steam freight locomotives, eleven steam passenger locomotives, 13,238 hopper and gondola coal cars, 289 other freight cars, 28 passenger cars, 173 units of company service equipment and 13 units of miscellaneous

	Structural steel A.A.R	High-Strength Steels Structural steel A.S.T.M.  —A7-42 ¾ in. thick and under	Typical example of high-
Yield point, Ib. per	0.5 tensile strength	0.5 tensile strength but not less than 33,000	50,000 min.
Tensile strength, Ib. per sq. in.: Grade A Grade B Grade C Elongation in 2 in., min.; per cent:	60,000-72,000 50,000-62,000 48,000-58,000	60,000-72,000	70,000 min.
Grade B Grade C Elongation in 8 in., min.	22 25 1,500,000*	1,500,000*	 1,500,000°
Specimen cold bend: Grade A Grade B	T.S.  180 deg. D = ½T  180 deg. D = ½T	T.S. 180 deg. D == 1/3 T	T.S. 180 deg. D = 1T

\* For material under \*/10 in. in thickness a deduction of 1.25 per cent shall be made for each decrease of \*1/10 in. of the specified thickness or diameter below \*3/10 in.

high-strength steels with those of the ordinary structural steels.

From an engineering standpoint, the most significant physical property of the subject group of steels, aside from their corrosion resistance and excellent endurance strength, is their high yield point. This latter property owes its imthe former and 25,000 lb. per sq. in. in the latter may be encountered and that in these cases, which may be frequent, the examples given are too favorable and should be revised to conform to the values actually existing in the material supplied.

Part II will discuss specific prob-

equipment. This equipment had a depreciated and amortized book value of \$21,436,349.

The company's steam locomotives and cars are repaired at its Princeton shops, which are now being modernized and enlarged. Electric locomotives are repaired at the Mullens shops. Since the end of 1939 the company has built in its own shops, 3,400 55-ton hopper coal cars-2,400 of all-steel construction and 1,000 of composite wood and steel construction-at a cost of \$7,354,869 provided for from its own resources.

During 1935-1944, inclusive, a program of heavy repairs to coal cars resulted in 13,030 cars being repaired and returned to service at a cost of \$9,620,-190.

Of this, \$7,685,454 was charged to operating expenses (\$7,019,108 prior to 1944 and \$666,346 in 1944) and \$795,860 to investment account. The balance, \$1,138,876, will be charged to operating expenses monthly during 1945 and 1946.

#### Locomotive Purchases

The company received delivery this month of the last of eight Alleghany type 2-6-6-6 simple Mallet steam locomotives with tractive power of 110,200 lb. each. The locomotives are designed to haul coal and other heavy tonnage between Roanoke and Sewalls Point and should be effective in improving the movement of traffic and promoting traffic efficiency. Their cost, \$2,277,600, will be paid without borrowing. Four 2-8-8-2 compound Mallet steam locomotives are now being modernized in the railroad's shops.

Although there is some delayed maintenance due to war-time restrictions on material, this is not considered substantial and the company's road property and equipment as a whole have been maintained in good condition. During the past 10 years a total of \$3,279,259 for road depreciation and \$12,758,889 for equipment depreciation was included in maintenance expense.

Beginning in 1942 expenditures for road and equipment properties acquired under defense projects, aggregating \$9,-132,109 to December 31, 1944, are being amortized by charges to maintenance expenses over a five-year period. To December 31, 1944, \$3,588,572 has been so charged as follows: 1942-road \$31,693. equipment \$683,701; 1943—road \$169,-547, equipment \$1,079,963; 1944—road \$238,327, equipment \$1,385,341.

#### Ownership of Railroad

On January 19, 1937, the Virginian Corporation acquired 944,000 common stock shares of the railroad company, equivalent to 75.5 per cent of the outstanding common stock and 39.8 per cent of the total voting power. Eastern Gas & Fuel Associates, a Massachusetts voluntary trust, owns 72 per cent of the class B preferred stock and 66% per cent of the common stock (the only voting stock) of the Virginian Corporation.

#### Blackhall Car Washer

With a background of experience in the installation and operation of 150 Blackhall bus washers for cleaning transit company buses and highway coaches, the Ross & White Co., Chicago, has developed an application of this type of equipment for cleaning railroad passenger-train cars. One has recently been installed for the Baltimore & Ohio and the Alton at the West Fifteenth and Loomis streets track elevation, Chicago.

The Blackhall patent car washer is a stationary machine, bolted securely to concrete foundations. It consists of two H-beam columns on which are supported three brushes on each side-two body brushes for the cars and one window brush, revolving in opposite directions. Thus, the windows receive cleaning from three brushes on each side. A fan spray with special nozzles wets down the dirt on the car. Then the three brushes, which have water supplied through bell nozzles into the brushes behind the water guards, scrub the dirt off the car. A final cleansing spray washes off the muddy water, leaving the car thoroughly clean.

Located 145 ft. from the washer is a small-nozzle air-operated acid spray, used, when the amount of dirt necessitates this treatment, to supply a certain amount of oxalic acid or cleaner to the sides of the car, without dripping or loss of acid. This works on the dirt while each car is moving a distance of 145 ft. to the washer. When acid is applied, the entrance fan spray is shut off by a valve and the first large body brush rubs the acid onto the surface. The next two brushes (the window and the second side brush) stir this up into a soapy foam which is washed off by a final clean spray.

One of the features of the Blackhall car washer is its use of the Fullergript brush strip, held in split aluminum cores or hubs on the brush shafts, thus facilitating quick renewal when necessary. The large body brushes on each side of the washer are driven by individual waterproof General Electric, motors, with Allis-Chalmers Tex-Rope drives and the small window brushes, by 2-hp. motors.

Cars are run through the washer slowly to get the best washing performance. The time required is about 11/2 min. per car. An average of 115 cars are being washed a day, with the Capitol Limited of the Baltimore & Ohio, consisting of 13 passenger coaches, each 80 ft. long, being washed every morning in 30 min.

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#### Truman Asks

(Continued from page 1053)

Ask yourself 'Is this trip necessary?' It is not necessary if the trip does not help with the winning of the war, or if its purpose can be reasonably accomplished by telephone or corre-

reasonably accomplished by telephone of correspondence.

2. Vacation at home. The vacation season coincides with the peak of the military movement.

3. Cooperate with requests of the War Committee on Conventions.

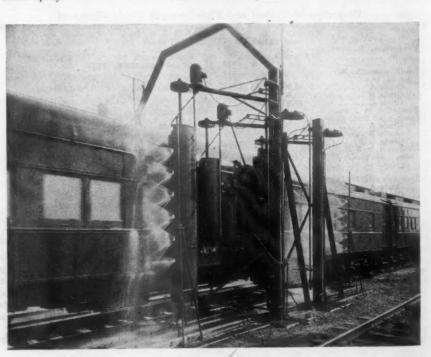
4. Large users of transportation . . . should reexamine their requirements and reduce their

reexamine their requirements and reduce their travel to a minimum.

5. Shippers of freight and all industrial organizations should continue faithfully to follow O.D.T. regulations. The limited supply of freight equipment must be completely utilized. Receivers of freight should operate on a six-day basis; load and unload cars without delay.

6. Private motorists must keep their cars in good running condition. . . With local transit facilities already overloaded, they cannot carry careless, carless motorists.

Rationing If All Else Fails-With intensive cooperation along the foregoing lines, Colonel Johnson is confident that the transportation agencies will be able to carry on without rationing-"even with the probable reduction in equipment available to the public.'



## A Great Day Coming for the Railroads

Carriers, having indisputably shown the country's need for their service, will enter a post-war period of large improvement, given a reasonably fair chance by politics

S WE TURN from our maximum A war effort toward the first glimmerings of eventual peace, we should not forget the burden which the war effort called upon the railroads to assume. Between World Wars I and II we developed a good many types of carriers besides railroads. These newer carriers by 1939 had assumed a great deal of the nation's customary peace-time trans-

portation burden.

These auxiliary methods of transportation in the early months of American participation in World War II suffered casualties. Rubber was curtailed, gaso-line was limited, submarines came along, even the Panama Canal became out of bounds. The "stand-by" service of the railroads was called upon again and again just as there was being added to the customary civilian traffic the immense war traffic in materials and supplies demanded by our fighting forces.

#### Railroad Resourcefulness

What this meant in increased dependence upon the railroads is best expressed in some estimates from the Association of American Railroads, showing that the railroad proportion of total inter-city freight transportation in the United States rose from 62 per cent in 1939 to 70 per cent in 1942 and to more than 71 per cent in 1943 and 1944, when the annual total for all carriers was more than a thousand billion tonmiles. On the passenger side the several agencies of transport (excluding the private passenger automobile, which was really the war's biggest transport casualty) handled a peak business in 1944 of roundly 135 billion passengermiles. The railroads' proportion of this business rose from 61 per cent in 1939 to 71 per cent in 1944.

Without the tremendous excess capacity of the railroads, this vast growth in our national transportation needs could not possibly have been handled.

From Pearl Harbor to the end of December, 1944, the railroads transported approximately 37,200,000 members of our armed forces in special troop trains or in special troop cars attached to regular trains. This figure does not include many millions of railway journeys made by uniformed men and women traveling singly or in small groups in line of duty or on furlough.

From 1940 to 1944 export freight by railroad more than doubled. Unloadings

This article is a digest of an address by Mr.

#### By WAYNE A. JOHNSTON

President, Illinois Central

for that purpose at all American ports in 1940 were 818,000 carloads. business grew through 1941 and 1942 and 1943 to a record war-time top in 1944 totaling 1,913,000 carloads. Of all kinds of freight, the railroads handled during 1944, our latest full war year, an all-time record-breaking total of 738 billion ton-miles. This was nearly double the corresponding traffic of 1918, the big year of World War I. In 1944 we likewise broke all records in passenger traffic with a total of 96 billion passengermiles, which was considerably more than twice the corresponding 1918 performance and more than four times as large as our pre-war passenger-mile total of

For the long-pull post-war future we must first of all agree upon certain guiding principles and hew to the line they set us. One thing I see ahead of us on the railroads after the war is a tremendous challenge in the field of human relations. It has often been said that the greatest asset of any business is the people who work for it. The challenge which I see in railroading is to make the most of that great asset. I want our railroads to lead the way in a creative partnership of men and management. This involves: the finest selection we can make of new employees; a balanced program of indoctrination and training: a continuing plan for the fullest sharing of managerial information with all railroad workers; recognition and tangible rewards that will stimulate every worker in every rank to put forth his best efforts at all times; and a character of leadership that will win and deserve the confidence and loyalty of every individual in the industry.

Another thing I see ahead of us in the railroad business after the war is continuance on to higher ground in the never-ending evolution of the art of transportation. The industry needs new equipment, new machinery, new methods. In the past fifteen years the railroad business has undergone two great tests. First was the depression, which halved the traffic and revenues of the railroads. The railroads met that test with brilliancy. Before the books were closed on that great test, the outbreak of war plunged the railroads into another, with rapidly and greatly mounting demands for transportation in the midst of unprecedented shortages of men and materials. These two tests have demonstrated the enormous possibilities of the railroads. As we face the future we must resolve to realize the utmost

upon these possibilities.

Still another thing I see ahead of us in the railroad business after the war is a struggle to sustain the sources of traffic which furnish the lifeblood of our railroads. It is unnecessary to prove the simple statement that everything else depends upon our success in doing that. Upon our traffic depends the security of employment of our workers. Upon our traffic depends our ability to obtain and utilize the new tools we must have to make the railroads better instruments of service to the American people.

#### Traffic Outlook Favorable

There are some people who seem to be pessimistic concerning the future traffic of our railroads. I am not one of them. We are in the midst of a great industrial revolution in America-a revolution in which new methods, new processes, new materials and new products are changing the industrial map of the country. A similar revolution is going on in agriculture. The end of the war will find us not going back to a pre-war economy but going forward to a postwar economy. I look for heavy exports from the United States for at least five years after the war-and for much longer than that if our business people take full advantage of the foreign trade situation. Europe must have housing materials, machinery, farm equipment, locomotives, cars. Latin America, which prior to the war went to Europe for so many of its imports, must for a long time continue to look to the United States. It has a starting credit of some five billion dollars in this country which will be used to buy goods here.

The railroads are one war industry that has no reconversion problem. Our products are ton-miles and passengermiles. Our tools are locomotives and cars and yards and shops and stations. Both our products and our tools are the same for war or peace. The skills required to operate the railroads are the same for peace or war. We will not have to close down or slow down for one

moment to change over.

That does not mean there will be no change on the railroads after the war. I am confident that the next five years (God granting an early end of the Japanese war) will witness the greatest transformation in the tools and methods of the railway business that we have

ever had in anything like that period of time. This transformation will be mainly in the direction of modernization. were already doing a lot of that when this war started. We will pick up where

One example of the trend we had in progress when the war started was overnight freight service to points far distant—points that previously managed to get along with deliveries 24 to 36 hours from the time of shipment. Chicago was interested in that, because it was our pioneer MS-1 that made possible such service to Memphis, 527 miles away. It provided pick-up of l. c. l. freight at the close of one business day in Chicago and delivery in Memphis at the beginning of the following business day. I never saw a freight train on which business picked up faster than on MS-1 from the moment of its

entry into service.

There will be improvements likewise in freight terminals to expedite and protect shipments and to reduce expense of handling. Special service and equipment will also be provided for freight that moves in carloads, particularly perishables and other fast freight. There will be better power, better cars, better track, elimination of terminal delays. Passenger service, too, will be improved. There will be more and better streamline trains, with smart styling, comfort and convenience-all based upon our own studies as well as analyses of the needs and desires of our passengers, both old and new. The war brought us a lot of new passengers, many of whom had never been on a train before; we will do our best to keep them for customers.

#### Much Improvement Needed

Improvement and maintenance of schedules require a good deal of work and money behind the scenes on the railroads as well as out in the open where the customers see what is going on. We have to start at the foundation, with improvement in the track, and we have to build in added quality and dependability all the way up, including bridges, signals, terminals, communications, cars—and better information and understanding among the personnel charged with getting out the needed performance. It is a long row and a hard one, and we have to hoe it all the way.

I say of competition: Let it come! Give us policies of government that will be conducive to some semblance of equal opportunity, and the railroads will take care of themselves. Make it truly a struggle for survival of the fittest, and the railroads will not be found wanting. Our generation of railroaders can live

up to our greatest traditions.

1062

We must have railroads in and for America—solvent railroads, strong railroads, manned by alert and respected workmen, directed by progressive management, modernized to fit the needs of post-war America, operating under sound policies of government, and commanding the confidence of the American people.

#### "Know-Your-Railroad" Forums

we had to leave off when the war came Promoted jointly by labor unions and management of the Boston & Maine, this second discussion course, within 9months period, holds graduation exercises

> BECAUSE of the success last fall of the Boston & Maine's discussion course on Railroad Human and Industrial Relations, jointly sponsored by labor and management under the auspices of the Railroad Y. M. C. A., and with the co-operation of the Massachusetts Division of University Extension, a second course on "Know Your Rail-road" has been conducted during the past three months and reached a successful conclusion in graduation exercises in the ballroom of the Hotel Manger, Boston, on Tuesday, May 22, 1945.

#### Promoting Understanding

The initial suggestion for these courses came from a labor union representative, who felt that improved results could be obtained, to the mutual satisfaction of the public, the workers, the management and the stockholders, if better understanding could be promoted between men and management. While the first course dealt largely with the presentation and discussion of problems concerning the relations between men and management, the second course on "Know Your Railroad," was planned to disclose the vital part that the railroads play in our national economy and in the war effort, and to emphasize more or less specifically the importance of every phase of railroad activity and the necessity for having these activities thoroughly integrated and co-ordinated.

#### Topics and Speakers

The following list of topics and the speakers to whom they were assigned will give an idea of the scope and content of the course.

What the Railroads Have Done (Are Doing) for Our Country, Col. Robert S. Henry, assistant to president, Association of American

assistant to president, Association of American Railroads.

How the American Railroads are Helping Win the War, W. H. Day, manager, Transportation Bureau, Boston Chamber of Commerce.

What the Public Expects from the Railroads in the Way of Service, Ralph Flanders, president, Federal Reserve Bank, Boston.

How to Meet Post-War Competition (from labor viewpoint), Samuel L. Newman, vicepresident, International Association of Machinists.

How to Meet Post-War Competition (from management viewpoint), Carleton W. Meyer, assistant to president, New York Central.

Railroading South of the Border, by Eduardo Azuola, Costa Rican Consulate Service.

Your Job on the Railroad—Engineering Department, T. F. Holleran, international vicepresident, Brotherhood of Maintenance of Way Employees.

Your Job on the Railroad—Clerical Department, George F. Glacy, comptroller, Boston & Maine.

Your Job on the Railroad—Mechanical De-

Maine.
Your Job on the Railroad—Mechanical De-

partment, B. M. Jewell, president, Railway Enployees Department, A. F. of L.
Your Job on the Railroad—Operating Department, J. L. Elliott, vice-president, Order of Railway Telegraphers.
The Various Departments of the Railroad—Their Function and Interdependence Upon One Another, L. F. Whittemore, assistant to president, Boston & Maine.

The original intention was to place Mr. Whittemore's address earlier in the program as an introduction to the "Your Job on the Railroad" talks. Circumstances made this impossible and Mr. Azuola's address was substituted for that particular evening. While a little out of line with the over-all theme, this address, which was an addition to the original program, proved most satisfactory and was well received. As in the first course the open-forum questions and discussion periods proved specially interesting and developed much helpful

#### Awarding of Certificates

The enrollment - somewhat smaller than that for the first course—was 150. There is no question but that interest and thinking have been stimulated as to how the personnel of the railroad may become better acquainted with the overall activities of a railroad and its different departments, and how they are dependent upon one another for successful operation. Certificates were awarded to those students who attended eight of the eleven meetings in the course and who answered the examination questions satisfactorily.

It may be of interest to know just what sort of written test is required. The student was asked to answer two of the following three questions. The answers were graded on the basis of a maximum of 40 points each.

1. State three ways in which the railroads have assisted in the industrial development of the United States.

2. Outline your ideas on what the railroads need to do to meet post-war competition from other means of transpor-

3. Write a brief paper showing how your job on the railroad is affected by the work done in one of the following departments (not your own): Engineering, clerical, mechanical, operating.

In addition to these questions 20 statements were made, each to be marked T (true) or F (false), the grading being one point for each correct answer. A perfect score for the entire examination would therefore rate 100.

One of the highest rated examination papers was that submitted by Belden Wigglesworth of the Freight Traffic tions 1 Ecor

Tariff

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<sup>\*</sup> See Railway Age November 25, 1944, p. 804; December 30, 1944, p. 992; January 13, 1945, p. 140; and February 10, 1945, p. 306.

Tariff Bureau. His answers to questions 1 and 2 follow:

#### Economic Value of Railroads

 State three ways in which the railroads have assisted in the industrial development of the United States.

The rise in the nineteenth century of the United States from the position of a second-class power to that of world leadership was brought about by the rapid development of its industries which, in turn, was due to the even more rapid growth of its far-flung network of railroads. Thus inland cities flourished where, a generation earlier, none had existed. In the industrial development of this country the railroads have contributed in at least three important ways.

First, place utility value was added to many commodities important to modern life. As an example of this we can take the borax deposits in Death Valley, California-enormous and limitless deposits which are useless where they lie. Borax, however, is useful for a number of industrial and domestic purposes, so it is mined and transported by railroad to various cities and towns throughout the United States, where it has a ready market at prices sufficient to defray the capital and labor costs incidental to the production, transportation and marketng involved. The difference in value of the borax in Death Valley and, let us say, Boston, Massachusetts, is due in part at least to the railroads which are used to move it from the place of abundance to the place of scarcity. Thus, through the railroads, place utility value has been added to an otherwise useless commodity.

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Second, the division and sub-division of labor within industry, based on an abundant supply of efficient labor, has been one of the motivating forces of industrial development. Rapid and efficient means of transportation have brought about the establishment of large factories (in contrast to the scattered individual enterprises of an earlier day), either near the sources of supply of raw materials or near the consuming markets, depending on the difference between transportation rates on the raw materials and on the finished products. In these large factories men and machines are employed to perform the various creative and finishing processes under a system of division of labor. Thus it can be seen that the economics of large scale production based on the division and sub-division of labor are made possible through the availability of rapid and efficient railroad facilities.

Third, railroads have influenced the industrial production processes themselves, the best example being the meat business. Before the era of rapid and efficient railroad transportation food animals were slaughtered by farmers and local butchers. Improved transportation facilities brought about the raising of food animals in large herds for shipment to the great meat-packing centers, where the animals were slaughtered, and the meat, hides, skins, and by-products were prepared under factory conditions. In

like manner fresh and cured meats, canned packing-house products, hides and by-products were transported by the railroads to distribution points throughout the entire United States. Special services, such as the peddler-cars serving small communities, which would otherwise be without the benefit of city-dressed meats, have created markets where none existed before. Thus, by influencing industrial processes, the railroads have created markets, extended existing markets, and caused a geographical division of labor as well as a local division of labor.

#### Post-War Competition

2. Outline your ideas on what the railroads need to do to meet post-war competition.

In considering what the railroads should do to meet post-war competition from other means of transportation, let us divide our subject into five headings:

(1) Technological improvements; (2) passenger traffic; (3) freight traffic;

passenger traffic; (3) freight traffic; (4) labor relations; (5) public relations. 1. Technological Improvements.—As Carleton W. Meyer of the New York Central System remarked, change is the hall-mark of our age, and anyone who thinks otherwise is fooling no one but himself. Speed, of course, is one of the main and controlling factors in transportation, whether it be with passenger service or with freight service. Already technological improvements in these war years have indicated the trend of development in the source of motive power. The Diesel engine is an established fact, but the possibilities of the gas turbine are not being neglected. Just as the Diesel engine with its ratio of 25 lb. weight for each horsepower developed, far outshines the older and long established sources of automotive power, so does the gas turbine with its ratio of one pound for each horsepower developed, give promise of surpassing the Diesel engine.

Technological improvements, however, apply to all branches of railroading, and their development and application must be so considered. Indeed, in the field of technological improvements the railroads can probably do their most effective work in meeting the changing needs of the years that lie ahead.

2. Passenger Traffic .- Post-war competition from the air will affect passenger travel most noticeably in the longer journeys, and transcontinental trips especially, where speed is of paramount importance. Where shorter journeys are concerned, those up to a thousand miles, the railroads should hold their own. There is, of course, the problem of meeting highway competition, a problem which can only be solved by federal and state legislation more favorable to the railroads than any now on the statute books. Such legislation should enable the railroads to achieve ownership of the means of transportation both on the highway and in the air. To return to the average passenger; in his traveling he desires speed, spaciousness and comfort (in combination) and it is these factors that the railroads can most assuredly supply. Improvements, such as the contemplated "globe" car, will be necessary, but in the long run the railroads, if they continue to give efficient service at fair rates, need not worry about their passenger business.

3. Freight Traffic.-Freight revenue constitutes the basis and the bulk of all railroad revenues. The adjustment of policy and practice to the changing times is more important in this field than in any other. Where light freight is concerned, the development and application of an l.c.l. express rate has been suggested to meet the threat of post-war competition both on the highway and in the air. The step seems a logical one, especially for l.c.l. commodities that are not perishable. Where heavier or carload freight is concerned, the problem seems to be that of a continuous supply of commodities which should be shipped regularly and delivered on time.

4. Labor Relations .- Satisfactory labor relations, which is to say, satisfactory relations between management and labor, constitute a sphere of action which, if successfully maintained, will go far in aiding the railroads to meet post-war competition. The benefits of collective bargaining should probably be more widely spread, and working conditions, especially in the operational field, should be improved as occasion demands. The rising toll of injuries to railroad employees, as cited by J. L. Elliott, vice-president of the Order of Railway Telegraphers, presents a problem that should be pondered seriously. And finally, a shorter work week may be necessary in order to absorb the displacements of employees brought about by technological advances.

5. Public Relations. — Satisfactory public relations will be more necessary to the railroads than ever before, and by satisfactory I mean public relations that produce results favorable to the railroads. The problem here is a difficult one, a problem concerning the handling of which even Col. Robert S. Henry, assistant to the president of the Association of American Railroads, was

The public does not yet realize what the railroads are up against in competition from other forms of transportation which are subsidized either directly or indirectly. The answer here is not to subsidize the railroads, for they do not want to be subsidized. The railroads want to pay their own way, as they have always done, and they wish to be treated on a basis of equity with their competitors. The railroads must seek both federal and state legislation to enable them to meet highway and air competition through ownership of bus, truck and air lines. Through all the media of advertising that are available, the railroads should emphasize their position as public utility which, though privately owned and operated, or perhaps because they are privately owned and operated, should not be subjected to unfair competition through utterly unjust methods

## Railroads-in-War News

#### 735th Op. Bn. Now **Operates at Hamm**

Setting up headquarters April 13, unit currently supplies occupying force

The Erie-sponsored 735th Railway Operating Battalion, which played a significant role in supplying the armies in the drive across France and into Germany, and which was on hand for the final victory, now will aid in the rehabilitation of the wrecked German railway lines. Headquarters reveals the 735th will remain to give the American occupying force an adequate system of supply and to speed redeployment of troops bound for home or other war theaters.

Under command of Lt. Col. H. C. Baughn, of Needles, Cal., formerly with the Santa Fe, and later with the Whitehorse Pass Railway in Alaska, the 735th set up operating headquarters in Hamm,

Germany, April 13.

Company "C" now operates over three lines in Germany: Munster to Hamm to Herford; Munster to Bielefield via Hamm; and Munster to Bielefield via Rhoda. Capt. Von O. Zimmerman, of Altamont, Ill., a former trainmaster on the Illinois Central, is supervising operations. More than 300 German railroaders, working day-time shifts only, are employed. About 3,000 "displaced persons" are being moved out of Rhoda daily, with as many as five prisonerof-war trains, averaging 160 cars and 10,000 prisoners.

According to Headquarters, all of the German railroaders are "experienced men who were evacuated east of the Rhine and have given no trouble whatever." All, it is said, "are eager to get back to work." American timekeepers record time and release their records to the local burgermeister who pays the German railroaders out of German funds held in local banks.

The 735th, during the allied drive into central Germany, particularly in the Ruhr Valley, at its peak supplied the First and Ninth armies with 51,000 gross tons, or 14,000 net tons. So badly damaged were the railway yards at Hamm which, incidentally, are the largest classification yards on the continent, that when the battalion started work in that area only the passenger yards were usable.

Company "A," commanded by Capt. Leland W. Howard, of Gulfport, Miss., for-

merly in the maintenance of way department of the Illinois Central, found 600 gondolas, 600 box cars and 200 miscellaneous cars intact when the battalion arrived in Hamm. Locomotive power was found to be in "fair condition," and "superior" to French and Belgian power. "A" company

followed the Engineers, who had laid a single main-line track through the yards, and themselves repaired a number of singleand double-track lines. Twelve trains a day now are leaving Hamm.

Army railroaders in Germany are not making the extensive repairs and reconstruction of railroad centers and lines that they did in France and Belgium; enough line for army operation" is being placed into service, Headquarters reports.

When the 735th first took over in Germany there were the usual attempts at sabotage. Farm wagons were found on tracks, snipings occurred and on one occasion an engine crew escaped without injury

when its locomotive blew up.

To the surprise of Company "B," commanded by a former master mechanic from the Midland Valley, Capt. Cyrstal L. Andress of Muskogee, Okla., the locomotive turntables and stalls at Bielefield and Hamm were found in "excellent condition." Operating these roundhouses, "B" company now turns 35 locomotives each day at Bielefield and about 20 a day at Hamm. Headquarters reports "skilled German mechanics are working with the American mechanics and are very dependable and willing.

Headquarters company, headed by Capt. Algot E. Sord, of Superior, Wis., and formerly with the Soo Line, is installed on a 50-car train consisting of a complete office, chapel, dental laboratory, medical laboratory, orderly room, dispatcher's car, shower

cars, mess, supply and mail cars.

RHINE RAILROAD BRIDGE 1056 ENGINEER GROUP HIS BRIDGE DEDICATED TO MAJOR ROBERT A GOUDIN CPL ANTHONY E WEDGE PVI EVANDRO L CONTRI GAVE THEIR LIVES IN 115 CONSTRUCTION

Hq. Co. of the 729th Railway Operating Battalion Submitted This Photograph Snapped at the Entrance to the Wesel Bridge on Dedication Day, April 8

(The 729th, it will be recalled from the report in Railway Age of April 28, had aided the Engineers by hauling heavy material to the bridge site. A former P.R.R. employee, Lt. Louis Eiffler, assistant trainmaster, was detail commander for the 729th on this job)

#### **Calls Crop Movement** Better Than in '44

Johnson also discusses travel conditions - will ration if necessary

Holding a June 12 press conference in Washington, D. C., to straighten out the record with respect to the grain-car supply situation, Colonel J. Monroe Johnson, di rector of the Office of Defense Transportation, found himself at the same time under a heavy barrage of questions about travel conditions and the prospects for rationing railroad passenger transportation. grain movement, the O. D. T. director asserted, is now "far better than we expected or hoped to see," and an O. D. T. press release issued at the conference gave figures showing that "American transportation is carrying more grain and grain products this year than for the same period in 1944.

Colonel Johnson's comments on travel rationing reflected his continuing reluctance to attempt the "impossible," but he did state that controls, perhaps in the form of priorities, would be installed if they become necessary to protect the travel needs of the armed forces and essential civilian business. Meanwhile, the O. D. T. director spoke again, as he had in his June 9 statement reported elsewhere herein, of his hope and confidence that public cooperation in the avoidance of unnecessary trips would eliminate any necessity for travel controls, since he can imagine "no more fertile source of headaches.'

The press conference was attended by J. J Pelley, president of the Association of American Railroads, and Warren C. Kendall, chairman of the A. A. R.'s Car Service Division, but they did not participate in

Alarmist Reports in Press-Colonel Johnson explained at the outset that the conference had been called because he had become "quite alarmed" about some of this week's newspaper stories about the grain situation, which "seems to be a constant subject now." Among other things, the newspapers reported that grain was being dumped on the ground, which, as the O. D. T. director put it, "is not news," for "there has never been a harvest year when grain was not dumped on the ground."

He recalled that he had forecast prospective conditions with respect to the grain movement in a February statement to the War Production Board, and the situation is now in much better shape than he dared hope for at that time. He pointed out that the country experienced early this year the "biggest box car shortage" on record as result of adverse weather conditions in the

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#### "Redeployment" Job Previewed by Army

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"Redeployment of America's armed might, to bring its full force to bear upon the Japanese enemy in the Pacific, will burden the nation's transportation facilities—rail, highway, marine, and air—to a greater degree than ever before," said a statement issued this week-end by the War Department. While thus pointing up the magnitude of the task ahead, the statement at the same time reflected the Army's confidence that the carriers would be equal to the test.

"It is a notable fact," it said, "that one of the smoothest-working of all war-time operations has been that involving the Army, the Navy and other services, the railroads and their Association of American Railroads, the Office of Defense Transportation and the various highway motor carrier and inland waterways groups. These agencies have planned together for a long time their respective and coordinate parts in the overall redeployment program, and have so geared their machinery that all cogs figure to mesh without grating."

December Travel Peak-Use of railroads in the transportation of military personnel is expected to reach its peak in December of this year "when about one and one-half million members of the combined armed forces will be criss-crossing the nation in Pullman cars, coaches, hospital cars, and troop sleepers. The coming peak in the movement of freight by rail, highway, and inland waterways, the Army estimates, will not be reached until April of next year when, it is expected, a little more than 11,000,000 tons will be hauled by these carriers. "Highway motor carriers, on the basis of precedent, will carry from nine to 10 per cent of the load, the waterways about two per cent, and the railroads the balance," the statement added.

The peak month in the movement of troops from the European and Mediterranean theaters by water is expected to occur in August, when approximately 400,000 men will embark from ports in those areas. The top month in outbound movement occurred in January of this year, when 278,000 troops were embarked. Major General Charles P. Gross, chief of transportation, Army Service Forces, predicts that the war's previous peaks in rail transportation of military personnel "will be topped repeatedly during redeployment operations."

Previous Peak in '43—The high to date in railroad transportation of armed forces occurred in August, 1943, when organized movements—of 40 or more men—totaled 1,104,426. As noted above, next December's comparable figure will be about one and one-half million; and travel by troops as individuals—on furlough, emergency leave, passes—or in groups numbering less than 40, is expected to increase it to approximately two million. It is estimated that for this top month in the move-

ment of troops, the Transportation Corps will require 24,500 Pullman cars, 11,380 coaches, and 6,375 baggage cars.

"This vast operation," the statement predicted, "probably will tax to the utmost the rail facilities of the nation, and especially those over which the West Coast ports of embarkation are serviced. These roads have expanded their facilities in anticipation of the increasing load and confidently expect to meet any and all tasks the war in the Pacific imposes upon them."

Equipment Needs-To give an idea "of the vast amount of rail equipment necessary to movement of troops in the Zone of the Interior," the statement had previously presented figures from a study of rail travel of Army personnel and its equipment between September, 1942, and March, 1945. "This study," it said, "shows the use of 347,510 Pullman (tourist type) cars, 195,453 coaches, 101,094 baggage cars, 82,-275 flat cars, and 61,747 cars of other descriptions for a total of 788,079. If these cars could be formed into one train, they would reach almost the exact distance in statute miles from New York to Yokohama via the Panama Canal and Honolulu, or almost half way around the equatorial circumference of the world. Employed for organized moves alone in April, 1943, when that type of movement reached its peak insofar as Army personnel is concerned, were 12,526 Pullman cars, 11,266 coaches, 4,064 baggage cars, 6,552 flat cars, and 2,190 cars of other types for a total of 36,598."

Meanwhile it was also pointed out that, as the war progressed, the Army and Allied agencies "affected many economies in the use of rail equipment in order to hold to an absolute minimum dislocation of civilian economy while keeping at the highest possible degree of efficiency and speed the prosecution of the war." Among such economies in the use of commercial rolling stock were those achieved as a result of the abandonment in June, 1943, of the practice of shipping with divisions on the move all organizational equipment. The new plan provided for incoming organizations to pick up and use equipment left behind by outgoing organizations. The statement said that "in this manner, through improved and increased loadings of flat cars, and in other ways, thousands of units of rolling stock were made available for other critical uses.

U. S.-Owned Cars-Also mentioned is that transaction whereby the Defense Plant Corporation sometime ago purchased for Army use 1,200 troop sleepers and 380 troop kitchen cars. In addition, the Army itself purchased 320 hospital cars and 60 medical kitchen cars, many of which are in service and all of which are expected to be in service by August 1. This equipment will be augmented further as a result of the recently-announced plan for the purchase by D. P. C. of an additional 1,200 troop sleepers and 400 troop kitchen cars. The statement said that these were ordered "at the request of the Office of Defense Transportation, which acted upon the suggestion of the Association of American Railroads." It is expected that deliveries will begin in

In making available the foregoing estimate of the transportation job ahead, Gen-(Continued on page 1069)

## Unprecedented Travel . Peaks Ahead--Kendall

Will come if "redeployment" moves on schedule, C. S. D. chairman says

Indicating his agreement with recent pronouncements of the War Department and Office of Defense Transportation, Chairman Warren C. Kendall of the Car Service Division, Association of American Railroads, predicted this week that railroad passenger transportation "will mount to unprecendented peaks between now and January 1, 1946," if the Army's announced "redeployment" plans are carried out on schedule. Mr. Kendall's prediction came in the June issue of the monthly report on the 'National Transportation Situation," which he has been sending to general chairmen and National Association officers of the Shippers' Advisory Boards.

No Let-Up in New Recruits—The latest War Department and O.D.T. pronouncements on "redeployment" are reported elsewhere herein, as is the "don't travel" appeal issued last week by President Truman. As Mr. Kendall noted, the War Department's announced plans call for the return to this country of approximately three million men in an 11-month period which began June 1. He also pointed out that while the "redeployed" soldiers are moving "a minimum of six times," the railroads are also being called upon to carry new men inducted into the Army through the workings of Selective Service.

At the same time freight traffic continues at top levels, Mr. Kendall noting that loadings for the week ended May 26-882,437 cars—set "the highest record for the same week during the past five years." Meanwhile, the C.S.D. chairman had given first place in his review to the May car detention reports, preliminary figures on the weekly checks made during that month having indicated that the percentage of cars detained beyond the 48 hours free time was lower than that for any other month since the car efficiency program was started in March, 1942. It was 15 per cent as compared with 17.1 per cent in May, 1944, and 23.2 per cent in May, 1943. At this point Mr. Kendall also stated that the War Committee on Conventions had approved applications for permits to hold the regular meetings of nine advisory boards, eight of which meetings are being held this month.

Fewer Cars Available—Overall equipment figures presented by the C.S.D. chairman showed that the number of serviceable freight cars decreased 5,108 from April 1 to May 1. On May 1 there were 57,573 cars, or 3.4 per cent of all freight cars, awaiting repairs. This compared with 47,544 cars, or 2.8 per cent, on May 1, 1944. There were 3,321 new cars installed in service during April, compared with 2,224 in April, 1944. The former figure included 1,330 box cars, 1,821 open tops, and 170 "scattering." There were on order as of May 1, 33,727 cars, including 17,607 box, 1,800 auto, 10,713 open top, and 3,607 of other types.

On the same date there were 554 locomotives on order.

Since Mr. Kendall's previous report, no general embargoes had been issued "except that it was necessary, due to truck strike in the Chicago area, to place an embargo on May 23 on all l.c.l. traffic, except government freight, consigned to all receivers in the Chicago switching district." The accumulation of cars containing freight for local delivery made it necessary to keep this embargo in effect a few days after the truckmen returned to work; but it was canceled on June 2. From January 1 through June 7, a total of 519 embargoes were placed-340 by C.S.D. and 179 by individual roads. The total for the same period last year was 515 embargoes, 407 by C.S.D. and 108 by individual roads.

Port Freight Eases Off—May unloadings of export and coastal freight at United States ports totaled 203,444 cars, or an average of 6,563 cars per calendar day, Mr. Kendall reported. This compared with April's daily average of 6,869 cars and March's 6,713. The May decrease under these previous months was attributed "to sharp falling off in movement of freight for the Army to the European theater, as a result of V-E Day," although "the commercial freight movement through the ports continues to increase."

As compared with May, 1944, last month's unloadings of export freight were up 17 per cent—due to the increase of 66 per cent at Pacific coast ports, which more than offset the 18 per cent drop in unloadings at North Atlantic ports. The situation at the ports continues "excellent," according to Mr. Kendall. He went on to say that as of June 1 there were 26,125 cars of export freight on wheels and 2,426 in railroad storage, a total of 28,551; and he calculated that on the basis of May's daily average unloadings "this means that there were only 4.0 days' supply in cars and 4.3 days' supply as a total on hand."

Mexico Interchange Improves—With respect to the Mexican interchange situation, Mr. Kendall reported that during the past month there was "an encouraging improvement in the return of U. S. cars by the National of Mexico, offsetting some of the losses experienced previously." While it has thus become possible to "slightly increase" the allowed movement of traffic to Mexico, the C.S.D. chairman emphasized that conditions "will not allow anything approaching free and unlimited loading" to that country. "Car supply conditions in the United States," he added, "are entirely too critical to allow any abnormal accumulation of U. S. cars in Mexican service."

Coming to his usual review of the situation with respect to specific types of freight cars, Mr. Kendall noted "some improvements" in the box car supply on western lines—"except on roads in the Southwestern territory serving the early winter wheat harvesting areas, where the supply continues tight." With the harvesting of this winter wheat now under way, roads serving that territory "will require all assistance possible through increased deliveries of empty box cars from their connections . . . and adjusted quota arrangements set up by the Car Service Division continue in

effect to provide all possible relief to the grain harvesting roads."

East Short on Box Cars-The box car supply on eastern and southern roads is "exceedingly tight, due principally to heavy requirements at Atlantic seaboard ports to release inbound cargoes of returning ammunition and other war materials since the close of the war in Europe," the C. S. D chairman went on. He added that the southeastern roads are at the same time faced with the necessity of providing ventilated box cars to take care of an "abnormally heavy" crop of watermelons, "necessitating taking this type of equipment out of general service in order to provide suitable equipment to load melons." Further relief to southeastern lines has been provided through movement of surplus stock cars to assist in meeting melon loading requirements. As Mr. Kendall reported in a subsequent discussion of the stock car situation, this has been possible because there has lately been "some falling off" in the loading of live stock. He anticipated, however, that requirements for stock cars for the loading of livestock "will again be on the increase in the near future.

Present heavy box car requirements in Eastern and Southeastern territories have made it necessary to provide "some relief through temporary reduction of box car quotas for movement to western lines." At the same time Mr. Kendall called attention to the higher grain loadings this year as compared with 1944. They totaled 549,613 cars during the 11 weeks ending June 2, an increase of 26.4 per cent above the 434,766 cars loaded during the comparable 1944 period. Carloadings of grain during the first 22 weeks of 1945 aggregated 1,018,306 cars compared with 1,008,246 cars during the corresponding period of 1944, a gain of 10,060 cars.

No Early Improvement-Despite recent reports "concerning unfavorable growing conditions in the southwest wheat area," Mr. Kendall emphasized that "there still remains a considerable amount of last year's grain which must be moved and this, together with continued heavy movement of munitions and other military supplies to our armed forces in the Pacific as well as food, clothing, etc., to liberated countries in Europe, will tax heavily the box car supply generally for some time to come." anticipated, nevertheless, that "in the long run all transportation requirements will be satisfactorily taken care of and no one will be actually hurt"-provided all concerned cooperate "in the matter of prompt loading and unloading and handling of this type of equipment.'

While there had been no coal car shortage during the period covered by his report, Mr. Kendall warned that the supply has become "increasingly thin"; and he anticipates that "some deficiencies will occur on some lines at week-ends," now that the anthracite and bituminous mines are back on full schedules after May's general "work stoppage" in the former and a series of local labor disputes in the latter. He added that "every effort should be made to give coal cars, both loaded and empty, the best possible handling to prevent a serious shortage developing."

Gondolas and Flats-Turning to gon-

dola car condition, the C. S. D. chairman noted how V-E Day brought a "decided change" in the trend of traffic using this type of equipment. While there is still some movement to Atlantic and Gulf ports, "the emphasis is now on the West coast and in the past month there has been a decided decrease in Eastern-Allegheny gondolas on eastern lines with a corresponding increase on western roads." So far requirements for gondolas "have been successfully met with only occasional deficiencies or deferred shipments cropping up at scattered points, particularly in the Southwest." At the same time Mr. Kendall stressed the increased turn-around involved in the now-predominant West-coast movements, which he said "makes it doubly necessary that the movement of gondolas be expedited in every possible way as a shortage, affecting the movement of vital war goods, could easily develop."

There has been no falling off in demand for plain flat cars, and the supply in the East "has been uncomfortably thin due to the same factors influencing gondolas." Because "some slight deficiencies or deferred shipments" have occurred recently, Mr. Kendall said it was "essential that the movement of flats be carefully supervised to keep them moving into producing areas." All requirements for heavy-capacity flat cars "have been satisfactorily met except for short delay in protecting one or two shipments requiring special types of which the ownership is small."

Tanks and Covered Hoppers-The demand for covered hoppers "is now in excess of supply and the number available has to be still further stretched to take care of important shipments." Meanwhile, C. S. D. has received reports "of numerous very serious delays to these cars," which at present require "particularly prompt han-dling and release." The tank car situation continues "extremely tight, with no prospects that it will be alleviated to any appreciable degree during the months ahead." The petroleum movement to the Pacific coast has increased steadily to the present average of about 830 cars per day while there has been no change in the East coast demand for approximately 2,500 cars per day. More than 75 per cent of all tank cars are in petroleum service, Mr. Kendall

with respect to the passenger car situation he noted that the normal trend at this time of the year is towards increasing travel. "However," he added, "under present conditions with curtailed service under O. D. T. orders, the possible civilian travel will probably be considerably hampered during the coming months. . . . The ultimate requirements for passenger carrying cars (coaches and sleepers) to meet the military program will necessitate getting the greatest possible use out of every car that can be made available."

Freight House Condition Is Better—Mr. Kendall devoted considerable attention to the "freight house situation," reporting that general conditions in that respect had "greatly improved in the last month." The weekly report made Friday, May 8, covering 280 freight houses showed approximately 2,100 cars on hand in excess of nor-

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mal, which was "at least two thousand cars better than the same date a month earlier." Moreover, two transfers accounted for 1,150 of the delayed cars as of June 8.

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While the C. S. D. chairman expected these improved freighthouse conditions to result in "much better handling of l.c.l. freight," he nevertheless suggested lines along which shippers could cooperate to promote "even greater improvement." His suggestions called for the industrial loading of trap cars in such a way as to permit their by-passing as many transfers as possible; greater use by shippers of O. D. T. permits to dispatch lightly-loaded cars to points within specified grain-loading territories; and cooperation with carriers in the routing of traffic.

#### May Export Traffic

Export freight, excluding coal and grain, handled through United States ports in May totaled 185,722 cars, compared with 170,487 cars in the same month last year, an increase of nine per cent, according to the Association of American Railroads.

Export grain unloaded at the ports in May totaled 16,821 cars, compared with 3,443 in May, 1944, or an increase of 389 per cent. Railroads handled 901 carloads of coastal freight in May, compared with 410 in the same month in 1944, or an increase of 120 per cent. The total of 203,444 cars of export and coastal freight, excluding coal, handled through the ports in May this year represented an average daily unloading of 6,563 cars. This was the fourth consecutive month that average unloadings have exceeded 6,000 cars daily.

#### M. R. S. Promotion

According to the current issue of "The Yankee Boomer," Military Railway Service publication, 1st Lt. Albert C. Berg, of Breckenridge, Minn., formerly with the Great Northern at St. Paul, and at present assistant adjutant in charge of personnel at general headquarters, M. R. S., was recently promoted to the rank of captain.

#### "Fan" Group Would Acquire Yosemite Valley

The 18-year-old president of the Pacific Coast Railroading Association, a railroad "fan" group, would like to have that organization acquire and operate the Yosemite Valley which has pending before the Interstate Commerce Commission an application for authority to abandon its 77.7-mile line between Merced, Cal., and El Portal. But serious I. C. C. consideration of the plan of the youthful entrepreneur—J. M. Mc-Fadden, a clerk employed by the Pacific Electric—is opposed by the Y. V.

This was revealed in the latter's reply to the association's petition for leave to intervene in the abandonment proceeding in which an examiner's proposed report has recommended commission approval of the application (see *Railway Age* of March 3, page 437). The reply asserted that the association "is not a railroad," but is "a hobby club engaged in promoting the interests of the railroads."

It identified Mr. McFadden as a youth, born in December, 1926, who has publicly stated that the association, organized by himself three years ago and "largely dormant because of the war," plans in the post-war period "to make trips together, publish a magazine, perhaps, and oppose railroad abandonment whenever necessary." Mr. McFadden is further reported to have said that the association has "leased" three unused railroad stations (in South Pasadena, Cal., Highland Park and Whittier) and has them "filled with timetables, pictures, and furnishings as meeting places."

The Y. V. is informed that membership in the association "does not exceed 40 persons, including honorary memberships" for officers of the Atchison, Topeka & Santa Fe, the Pacific Electric and of "various eastern railroads." The reply also reports on telephone conversations between Mr. McFadden and the Y. V. trustee, H. C. Bonsall. In such conversations, the association's president is said to have proposed "that he organize a corporation to operate the railroad." Because all of the foregoing convinces the Y. V. that Mr. McFadden and the association are "financially irresponsible," it asks the commission to deny the intervention petition.

#### May Employment 0.13 Per Cent Above Previous Year

Railroad employment increased 0.35 per cent—from 1,421,707 to 1,426,624—during the one-month period from mid-April to mid-May, and the May total was 0.13 per cent above that of May, 1944, according to the preliminary summary based on reports from Class I line haul roads and prepared by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The index number, based on the 1935-1939 average, was 140.3, as compared to 141.6 for the previous month and 140.2 for May, 1944.

May, 1945, employment was above that of the corresponding 1944 month in all groups except maintenance of equipment and stores and maintenance of way and structures, the decreases in these classifications being 1.11 per cent and 0.03 per cent, respectively. In other categories the range of increases was from 0.05 per cent for train and engine service to 2.54 per cent for executives, officials and staff assistants. In the comparison with the previous month, decreases were noted in three groups, 0.08 per cent in maintenance of equipment and stores, 0.1 per cent in professional, clerical and general, and 0.5 per cent in transportation other than train, engine and yard. In the other categories the range of increases was from 0.03 for yardmasters, switchtenders and hostlers to 1.8 per cent for maintenance of way and structures.

#### Western Railroads to Lose More Men to Armed Services

Although railroads of the West face a tremendous increase of traffic as a result of the Japanese war, they are scheduled to lose more men to the draft within the the next few months. This was made clear when, on June 12, representatives of the roads attended a meeting at Chicago with Army officers and officials of O. D. T. and Selective Service.

Col. John M. Baker, director of operations for Selective Service, told his listeners at the meeting that approximately 10,000

skilled workers of the 47,000 deferred by O. D. T. classification, will be drafted into military service. Additional men, Col. Baker said, will be drafted from eastern roads.

At the same meeting Robert L. Glenn, acting director of the O. D. T. division of transport personnel, declared that the only solution to the problem of western roads is to back up the recent request to the Army of Col. J. Monroe Johnson, O. D. T. director, to release 50,000 skilled railroad workers now that the war in Europe is over.

#### Say Car Shortage Hits Output of Wood Pulp

An important factor limiting the movement of pulpwood to the mills for the manufacture of pulp and paper products is the short supply of freight cars, according to a War Production Board report of a recent meeting of its Eastern pulpwood advisory committee. Failure of pulpwood production to exceed, or so far even to equal, the 1944 figure is a matter of "grave and national concern," it was said, but some hope was expressed that receipts will increase later this year, as equipment and labor supplies become easier.

The shortage of railroad cars and adverse weather were said to have contributed greatly to lower pulpwood receipts in recent months. The committee was informed that an increasing shortage of cars for the movement of pulpwood can be expected during the remainder of this year, as a result of the tremendous requirements of the armed services for transportation as the war effort against Japan is increased.

#### Railroading on the "Rathole" Division of the I. R. S.

"There is no comparison between railroading in Iran and railroading in the States," declares T/Sgt. Peter McCann, of Gillespie, Ill., until 1941 a fireman for the Litchfield & Madison, and at present one of two assistant road foremen of engines on the central division of the Iranian State Railways.

Back in 1943, on January 16 to be exact, Sergeant McCann was ordered to take the first train over the mountains on the single-track railroad between Andimeshk and Doroud. Referring to that run, the sergeant recalls "the engines had no headlights, no sanders, and about 25 per cent of air brake power." He had a "lot of luck on that first trip," he said, making what would be ordinarily a 14-16-hr. run in eight hours.

But on other trips over the "subway" or "rathole" division, as the stretch became known because of the miles of unventilated tunnels, Sergeant McCann admits he "wasn't so fortunate." Once he was stalled in a tunnel when the temperature registered 150 deg. An air hose had broken, automatically setting the brakes, but the sergeant succeeded in getting the train out and removing the hose from an unbraked car to replace the broken one. "That," he declares, "was as close to Hell as I ever hope to get."

S/Sgt. Ernest A. Schwarzbeck, of Monte Vista, Col., a former fireman and brakeman with the San Luis Central, is the other assistant road foreman of engines on the Andimeshk and Doroud line. Both Sergeants Schwarzbeck and McCann report to their officer road foremen, Lt. W. E. Lott, of Louisville, Ky., once an engineer on the Pennsylvania, and Lt. Robert E. Springer, of Girard, O., formerly a locomotive engineer for the Erie.

Lieutenant Lott who now knows "every rock formation between Andimeshk and Teheran," and says "it wouldn't be much of a thrill now to take an engine without lights over the mountains," can recall somewhat uneasily his first big assignment less than a month after he'd reached the Persian Gulf Command. Asked to fill in because no engineers were available, Lieutenant Lott, then a private, was assigned to take a train from Oum to Teheran.

"I was in the first of two steam locomotives, an American-built Mikado. British engine was coupled to my locomotive. My fireman was a brakeman who had never fired before. The conductor was an Iranian and in the second engine the engi-

neer also was an Iranian.

"It was night, pitch black, and raining. We had no headlights and no flashlights or lanterns. We tried to talk to the Iranians, but it wasn't any use. They didn't understand us, and we didn't understand them. All one could do was just sit in the cab and pray. We didn't know the location of the way stations." In short, the lieutenant declared, "If anyone was wide open to accidents, we were.'

#### Calls Crop Movement Better Than in '44

(Continued from page 1064)

Yet up to June 2 the railroads had hauled this year 1,018,300 cars of grain and grain products, as compared with 1,008,-246 cars in the same 1944 period.

Large Increase in Loadings-By individual roads, the grain loading increases this year as compared with 1944 were given by Colonel Johnson as follows: Atchison, Topeka & Santa Fe, 89.7 per cent; Chicago, Rock Island & Pacific, 46 per cent; Chicago, Burlington & Quincy, 56 per cent; Union Pacific, 43.6 per cent; Great Northern, 54 per cent; Northern Pacific, 23 per cent; Missouri Pacific, 51.5 per cent.

He also reported that between February 19 and May 3 eastern roads delivered to their western connections 93,686 more box cars than they received from the west. On June 1 the central western roads had on their lines 160,096 box cars or 113.8 per cent of their ownership as compared with 150,923 cars or 104.7 per cent of ownership on June 1, 1944. Also as of June 1, the southwestern roads had on line 60,815 box cars or 111.4 per cent of their ownership as compared with 53,168 cars or 93.4 per cent on June 1, 1944.

Waterways Get More Grain-Meanwhile the O. D. T. press release had pointed out that the inland waterways are now carrying 10 per cent more grain than in 1944. It also stated that only 43 grain elevators were blocked as of June 9, compared with the peak of 2,297 blocked as of March In this connection Colonel Johnson stated that elevators are not always blocked for want of cars, explaining that they are sometimes tied up because the market is not considered right for the sale of the stored grain. Also he noted that the whole grain movement is now under the permit system, adding that this makes people who trade

in grain "restive."

The colonel insisted he was not saying that the grain situation is "lovely," but he emphasized the critical nature of the whole transportation situation. "We are more worried about other things than wheat," he added, "Even today we're hauling it faster than they can unload it." Under present conditions, he said later on, it must be expected that some things will have to "wait a little while now and then." Meanwhile, he went on, "it can't be said that the transportation agencies haven't got more out of their equipment than any-one dreamed they would."

What They Say About El Dorado-Dealing specifically with the newspaper stories out of Kansas City to the effect that only 31 cars of wheat had been shipped out of El Dorado, Okla., Colonel Johnson presented figures to support his assertion that this was "completely wrong in fact." He said that since May 29, when the wheat movement started in the El Dorado area, 242 cars have been shipped from that point. The only interruption was on June 8 when a "bad washout" caused a "serious wreck" on the only line serving El Dorado. With the movement out of the El Dorado area much higher than last year, the colonel was unable to understand how anyone could be "very violent" about conditions there.

In his discussion of the passenger-service outlook, Colonel Johnson stated that civilian travelers will soon have to get along with 25 per cent of the Pullman facilities heretofore available to them. In other words such facilities will be cut 75 per cent when half the Pullmans now available are diverted (as they will be) to troop movements while additional furloughees are seeking Pullman accommodations. He put the prospective cut in civilian coach failities at from 10 to 12 per ent.

The O.D.T. director predicted that it will be impossible for a civilian, "without some help," to get travel accommodations to the West coast after July 1. On the other hand, he anticipates that eastbound transcontinental travel conditions will be relatively easy. Commenting on the task faced by the western roads in handling troops and materials for the Pacific war, Colonel Johnson said he had been unable to figure out "on paper" how they are going to do it—"but they all say they'll do it and they never fooled me yet."

#### Grain Movement to New Orleans Put Under O. D. T. Permits

The Office of Defense Transportation on June 11 made an O. D. T. permit system effective as to shipments of grain entering the port of New Orleans either by river barge or freight car. O. D. T. Order No. 51, establishing this requirement, was necessary, it was said, because of "congestion of both rail and water grain shipments beyond the rate at which the grain was being handled" through the terminal elevator.

"The O. D. T., these last few months, has been given the job of moving an enormous amount of grain from the interior to Atlantic and Gulf ports for export to our armies and allies overseas," said O. D. T. Director Johnson. "New Orleans can be one of the most useful grain ports in the nation. Its public grain elevator is constructed to permit the simultaneous discharge of railway cars and barges and the loading of ships. Located on the Mississippi river, it should be able to handle a considerable portion of the entire grain crop of the Mississippi valley in barges, and thus release a large number of critically needed railway cars for other uses."

At the same time the O. D. T. asnounced the appointment of a "port advisory committee;" to which was given the task of developing ways and means of increasing the movement of grain through New Orleans. The chairman is F. S. Keiser, associate director of the Railway Transport Department of the O. D. T. Other members include Victor Parvin, district port director for the O. D. T.; A. W. Kitto, assistant director of the O. D. T. Waterways Transport Department; S. J. Webster, representing the War Shipping Administration; Col. C. D. Howell, Orleans Port of Embarkation; O. C. Olsen, Board of Port Commissioners; W. J. Strauven and W. B. Fox, New Orleans Board of Trade; C. G. Raunch, Commodity Credit Corporation; C. F. Schully, Association of American Railroads; J. P. Kenny, American Waterways Operators; and C. D. Sturtevant, War Food Administration.

#### Plaque for Military Police

A plaque, representing appreciation for the service rendered by the Army's military police on railroad trains throughout the United States, was presented by David A. Crawford, president of the Pullman Company, to the Corps of Military Police on June 13, at the Union Station Plaza, Washington, D. C.

Ten M. P.'s, representing the nine Service Commands and the Military District of Washington, and Major General A. L. Lerch, Provost Marshal General, were present at the ceremony. Sergeant Albert Rose, of the Ninth Service Command, accepted the plaque for the Corps. He is the most travelled M. P., having 341,000 miles to his credit. His home is Blue Hill, Nebr.

#### Feverish Activity Preceded Reopening of Antwerp Port

An event of great significance to the Army at the European front was the reopening of the port of Antwerp on November 29, 1944, after more than four years of idleness. This chapter in the history of Transportation Corps and the Military Railway Service for some time has been a matter of record, but additional details concerning the 709th Railway Grand Division's assignment at Antwerp lately have come

According to T. C. Headquarters, Paris, two weeks before the first ship sailed into Antwerp, Capt. Carl O. Wilburn, of Laredo, Tex., a former general agent and yardmaster for the Missouri Pacific, and two enlisted men, Sgt. Edward S. Brunnette (Sheboygan, Wis.) and Pfc. Lawrence W. Likens (San Francisco, Cal.) were sent to

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the great Belgian port on a "detached service basis." There they were to establish a working liaison with the 13th port officials, Belgian railroad officers and the 743rd Railway Operating Battalion, the latter outfit being under the operating supervision of the 709th Grand Division. It was to be the job of the 709th to open the port, insofar as transportation of freight by railroad to the front was concerned.

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Upon their arrival, the three representatives of the grand division found several other 2nd M. R. S. officers already established in the city. Among these was a former engineer of track for the Wabash, Lt. Col. Charles T. Warren, of St. Louis, Mo., now assistant general superintendent of the 709th. Then followed meetings between port officials and the T. C. members in order to study maps and assign territory to the American and British units stationed in the

A search for mines was begun, with a test train carefully going over every foot of track. And yet, despite all precautions, several weeks later, one army railroader stepped on a booby trap while going about his yard work and was severely injured, headquarters reveals.

"Meanwhile," the account goes, "back along the rail lines from Antwerp, in the towns and villages along the buzz bomb routes, the rest of the personnel of the 709th Railway Grand Division felt the pressure being created by the formulation of plans at Antwerp. A demand was relayed to them from the port for a 'backlog' of 3,000 freight cars. With a target of 18,000 tons of freight to be shipped daily, it was estimated 3,000 cars would be necessary to insure a continuous flow of freight."

Although there was continuous bombing, strafing by the Luftwaffe, and smoke screens being laid over the port, "empty cars began coming in and the 709th Railway Grand Division announced it was ready." On the day when the first ship arrived, the first trainload of supplies was started out of Antwerp for the front.

#### "Redeployment" Job Previewed by Army

(Continued from page 1065)

eral Gross also revealed for the first time the scope of operations which have been carried on at Atlantic and Gulf coast ports of embarkation. Those ports dispatched 72,990,685 measurement tons of cargo and 4,803,554 troops between the time of the United States' entry into the war late in 1941 and the end of April, 1945. Since security restrictions have not been relaxed on the Army's West Coast ports of embarkation no like figures on their operations to date are available for publication.

The bulk of the Atlantic-Gulf job was done by the New York port through which 35,511,286 measurement tons of outbound cargo and 3,155,578 outbound troops passed. The Boston, Mass., port ranks second in personnel embarked, with a total of 738,215, but is third to Hampton Roads, Va., in outloading cargo. Hampton Roads dispatched 11,245,044 measurement tons of cargo and

721,175 troops; Boston's cargo loading stands at 8,437,081 measurement tons.

Other Ports—The New Orleans, La., port outloaded 5,008,273 measurement tons of cargo and embarked 158,223 troops, and the Charleston, S. C., port dispatched 2,648,596 measurement tons of cargo. Since the latter port was employed only on special occasions or in emergencies for the embarkation of troops, its outbound movement of personnel stands at only 30,363. Through the Philadelphia, Pa., cargo port, a subsidiary installation of the New York port, went 4,885,457 measurement tons of supplies, and through Baltimore, Md., a satellite of the Hampton Roads port, went 5,254,948 measurement tons.

The Army is confident that all troops in the European and Mediterranean theaters, excepting those who will make up the U. S. garrison strength, will have been evacuated in about one year from V-E Day. Some slight acceleration will be possible if enemy passenger liners can be brought into service rapidly. To accomplish the return of those troops now in Europe who are destined for the United States rather than for the Pacific direct from the European and Mediterranean theaters, the Army will employ approximately 370 vessels as against the 287 which engaged in outbound movements

Of the 3,100,000 American troops to be "redeployed," approximately 50,000 per month are to be moved by air under direction of the Air Transport Command. After clearance through the air ports of debarkation in this country, however, these troops generally will be taken over by the Transportation Corps for movement to and processing through disposition centers and movement to reception stations.

3,000 Daily Arrivals-"The pressure of redeployment," the statement went on, "will be so great that the New York port will average about 3,000 debarkees per day for 12 months starting with V-E Day, and Boston and Hampton Roads each about 1,500 per day. Men coming through New York will be processed through Camps Shanks, Kilmer, and Fort Hamilton, and at Hampton Roads, through Camp Patrick Henry. Camp Myles Standish will process Boston debarkees and troops returned by air via Bradley Field in Connecticut and Presque Isle, Me. Troops debarked at the New Orleans port will be processed through Jackson Barracks, a part of that installa-

"Once troops reach this country, they move in a steady stream through the distribution centers in not more than 48 hours, and in most instances in 24 hours or less, to the reception centers nearest their homes. In these stations they are furloughed. . . . In most cases these operations require no more than 48 hours. . . In many cases, troop ships are and will be evacuated at the ports in as little as two hours; other evacuations may take up to eight or ten hours depending upon passenger types. But from start to finish, the process is designed to be lightning fast with no place for red tape."

Such a program, as the statement put it, "naturally precludes any possibility" of relatives and friends seeing the returnees at the ports, in the port cities, in the disposi-

tion centers or reception centers. "For this reason, and because rail facilities will bear heavier military burdens than ever before," it added, "the Army counsels the civilian to await the returning soldiers at their homes. Those who fail to observe this advice and attempt to meet returning troops prior to their arrival in their home towns are doomed to disappointment."

The Charleston port of embarkation which, since November, 1943, has been the "home port" for the Atlantic fleet of Army hospital ships, will continue to receive the majority of such vessels employed to return patients from the European and Mediterranean theaters. In order to return all battle casualties by the end of August, "utmost use will be made of transports equipped with necessary facilities, and these will discharge their patients wherever they put in." Meanwhile, 20 troop transports will augment the hospital fleet for a time in order to speed return of casualties.

The Wounded—The transport-hospital ships are scheduled to return 18,210 casualties this month, 4,304 in July and 2,144 in August; and the Air Transport Command is to bring back 5,000 patients per month through the same three-month period. The Army hospital ships themselves are scheduled to return 6,790 patients this month, 8,772 in July, and 4,856 in August.

In addition to receiving the returning or "redeployed" troops, the Atlantic and Gulf coast ports of embarkation also will receive materiel returned for use in this country, for rehabilitation and future forwarding to the Pacific and for other purposes. "Their activities," the statement said in closing, "will decrease, naturally, as the flow of personnel and material from the European and Mediterranean theaters begin to taper off. The West Coast ports, on the other hand, already find their activity accelerated, and are geared to capacity operations until victory is achieved in the Pacific."

#### I. C. C. Service Orders

The Interstate Commerce Commissions has modified the requirements of its Service Order No. 242-B, which established increased demurrage charges on box carsheld for loading or unloading, by Amendment No. 1, effective June 7. This amendment exempts from the provisions of theorder traffic consigned or reconsigned for export, coastwise or intercoastal movement when held at or short of ports for transshipment, and eliminates the basic order's provision substituting the prescribed demurrage charges for storage charges.

Amendment No. 6 to Revised Service-Order No. 263, which has fixed sliding-scale demurrage charges on tank cars, suspends the order "until further order of the commission" while at the same time-extending the order's expiration date from August 1 to November 1. The amendment, dated June 12, made the suspension effective at 7:00 a. m. on June 15.

#### The "Lamentable Limited" No Stickler for Schedule

Now in Germany, the Union Pacificsponsored 723rd Railway Operating Battalion early in the year was stationed in France. There, operating 120 miles of railroad, the outfit during February and the first part of March chalked up 80,261 train-miles and moved over 426,570 tons of supplies. Then just before moving into Germany, the 723rd returned the division to the control of French railway personnel. So much for its operating record.

But while still in France, Headquarters recalls, "the unit played godfather to a determined but frustrated passenger train which never was able to run on time due to the precedence of military traffic." This "enterprise," the story goes, "was a boon to peregrinating Frenchmen but little more than a poor topic of conversation to the

men. Coaches usually were crowded to the point of incredibility by civilians armed with French bread loaves and wine bottles. After weeks of disregard to schedule, the 'Lamentable Limited' snorted into town on time one morning. Throngs crowded the platform filled with excitement, and milling G. I.'s pantomined bewildered disbelief over the event. Then, someone with a genius for exploding myths dashed out to announce that the train was on time, but he added triumphantly that the iron horse that stood panting before everyone's eyes was, however, 'Yesterday's' train running 24 hours late to the minute."

**Materials and Prices** 

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since June 3, and which are of interest to rail-

Allocation of Controlled Materials-The policy W. P. B. will be to grant no supplemental allocations of controlled materials beyond the levels already scheduled for the third quarter of 1945, except when absolutely necessary to assure needed additional production of items of highest urgency to the civilian economy. This was announced, W. P. B. said, in a move designed "to wean civilian industry away" from a dependence on Government allocations now that cutbacks in war production are freeing increasing amounts of ma-terials previously needed almost exclusively for and war supporting efforts.

Cancellation of Orders and Ratings—Manufacturers' responsibility to do their part to speed reconversion by carefully observing all requirements of W. P. B. regulations calling for cancellations of orders with ratings and the return of allotments of controlled materials is stressed in Interpretation 31 to CMPR-1. It is necessary that ratings and authorized controlled material orders no longer needed for their original purpose be promptly canceled in order to open up suppliers, order boards the interpretation and suppliers' order boards, the interpretation says.

W. P. B. will be unable to relax many of its remaining controls until it can be sure of the existence of substantial supplies that will flow without ratings.

It is also important that allotments be promptly returned to the source, which may be the customer or W. P. B. Industry Division, the interpretation adds, for this is the only definite way W. P. B. can determine the effect of military cutbacks on the supply of controlled material. Rapid relaxation of W. P. B. controls depends upon early and accurate information of supply and demands for materials during the third and fourth quarters of 1945.

Construction Materials-A round-up of the cur rent supply situation for construction materials was issued June 7, by the W. P. B. While forewas issued probable progressive improvement in future months, W. P. B. said that "it will take time, even after the extent of military cutbacks is known, to re-establish production, replace lost man-power and fill the pipelines." Present availability of chief construction materials is as fol-

Steel-Supply situation improving for shapes and plates, but not for other steel products.

Cast Iron Soil Pipe-In extremely short supply, with little stock available. Orders are very heavy and are increasing rapidly and no immediate relief is expected.

Cast Iron Pressure Pipe—In somewhat better position than soil pipe, though orders are heavy and are increasing. As with soil pipe, no im-provement is in sight.

Portland Cement-In ample supply.

Concrete Pipe-Readily available from stock or new production.

Concrete Masonry Products-In general adequate supply, with some local shortages. -In general, in

Structural Insulation Board—In fair supply, though subject to delay in deliveries. The supply situation is becoming tighter, as a result of export demands.

Hardboard-In tight supply, with no improvement in sight.

Laminated Fiber Board-In fair supply.

though subject to delay in deliveries.

Gypsum Board—While shipments have increased, unfilled orders are increasing more rapidly and delay in deliveries is increasing.

Asphalt Roofing—Production is increasing and is keeping pace with demands, but deliveries are

Large maintenance and repair demands are

Common and Face Brick-Though production is in general sufficient for current requirements on a national basis, there are serious local shortages

ages.
Structural Clay Tile—Nationally, production
and shipments are approximately in balance, but
reserves are low in Alabama, Georgia, North
Carolina and Oregon.
Floor and Wall Tile—Stocks very low and

production not sufficient to meet demand. Orders subject to six to eight months' delay in delivery.

Clay Sewer Pipe—Shipments exceed produc-tion. Though stocks are in excess of unfilled orders, a large proportion of stocks is made up of obsolete fittings and special sizes for which there is very little demand.

#### Cement-Asbestos Products

Corrugated Sheets-In short supply; manufacturers booked quarters of 1945.

Flat Sheets-Also tight and booked up into the third quarter.

Pipe-In easy supply; orders can be filled with little delay.

Shingles—Orders subject to long delivery de-lay; production below capacity.

#### Lumber and Lumber Products

Lumber—Demand greater than supply and this condition is likely to continue. Mill stocks are decreasing.

Hardwood Flooring—In tight supply; stocks are negligible and production for 1945 about all booked up.

Shingles—Supply of cypress and redwood shingles negligible; supply of cedar shingles some-what easier, though low.

Plywood-Softwood plywood under allocation control and little is available for general con-struction. Hardwood plywood, though not under control, also in short supply chiefly as a result heavy military demand.

Plumbing-Materials and fixtures not in good supply and subject to delays in deliveries.

Heating Equipment-Stocks of most items are limited and many are subject to long delivery

Metal Insect Screen Cloth-In critically short supply and, in general, available for only the most ssential civilian uses.

Conveying Equipment — General Limitation Order L-193, covering the distribution of and restricting the materials used in production of conveying machinery and equipment for transmission of mechanical power has been revoked.

Crossties—Because of a serious shortage, the production of railroad crossties has been given an urgency rating by the W. P. B., the O. D. T. announced recently. The urgency rating is part

of a program initiated by the O. D. T. in cooperation with other Government agencies to re-cruit more workers to produce highly essential railroad tie replacements.

Electric, Gas, Water and Communication Fa-cilities—Revocation of virtually all controls on installation of facilities by electric, gas, water and communications utilities has been announced. The new policy will permit utilities to make any addition to plant on an unrated basis, except construction of buildings with a materials cost in excess of \$25,000, without obtaining prior authorization from Washington. Building projects costing less than \$25,000 worth of materials also will be permitted on an unrated basis without authorization.

Fire Hose-Production of cotton rubber-lined fire hose cannot be stepped up to meet increased military requirements in full in the last half of 1945 unless additional cotton yarn and man-power can be made available to the industry, members of the Fire Hose Manufacturers In-dustry Advisory Committee said at their recent

Heavy Duty Tires-Heavy duty truck and bus tires will continue in tight supply despite some improvement in the availability of smaller sized improvement in the availability of smaller sized commercial motor vehicle tires, Col. J. Monroe Johnson, director of the O. D. T., said on June 7, in releasing figures on truck and bus tires allocated to O. D. T. for the third quarter of 1945. Colonel Johnson warned that the need for conservation of all types of tires will be doubly important during the summer months.

"New Order" Defined-The definition of what constitutes a new order when a customer, hav-ing placed an authorized controlled materials order with a producer, wishes to make changes in that order, is clarified by amendment to In-terpretation 10 to CMPR-1, issued June 7.

In no case does a change in shipping destination constitute the placing of a new interpretation states,

New Orders including the following:

(1) An increase in the total amount ordered, the extent of the increase;

(2) An advancement or deferment of delivery.

(3) Instruction to a producer, by a customer, to reinstate a suspended order.

Interpretation 30 to the regulation explains rules for the transfer of purchase orders, including rated purchase orders, when allotments are transferred under CMPR-1. The interpretation explains the conditions under which the transferred purchase order retains its position on the supplier's order board.

Plumbing Fixtures-Restrictions on the use of metal in the manufacture of plumbing fixtures, established by Schedule XII of L-42, have been removed by the revocation of the schedule facture and distribution are still controlled, however, by all other applicable W. P. B. orders and regulations.

#### Prices

Directory of Commodities and Services—The fifth edition of the Directory of Commodities and Services, containing about 10,000 major commodities and services now under price control, as well as other up-to-date information about the O. P. A. was issued June 11. The directory may be obtained at the cost price of \$1.25, which includes six monthly supplements to follow. All requests must be made to the Superintendent of Documents, Government Printing Office. Washington, D. C. Office, Washington, D. C.

Douglas Fir Millwork — Uniform dollar-and-cent ceiling prices at the mill level on Douglas fir stock millwork were established June 6. Prodfir stock millwork were established June 6. Products covered include frames, windows and sash and lineal sash stock, screen doors, combination doors and porchwork. Until now, ceiling prices of these millwork items have been frozen at March 1942 levels. Douglas fir doors and moldings are not affected.

The new maximum prices, effective June 11, with the exception of frames, are averages prevailing for the various products in March, 1942. Prices have differed with the various producers but are now made uniform. The ceiling on frames has been increased to enable producers to cover their average factory production costs.

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## GENERAL NEWS

#### Approves Santa Fe's **Entering Long Beach**

I. C. C. allows 2-mile extension in California over competitors' protests

The Interstate Commerce Commission has authorized the Atchison, Topeka & Santa Fe to construct a 2.02-mile extension to its lines, and so to gain access to the port, piers, docks and waterfront industries of Long Beach, Calif., by operating on tracks owned by the city and used for the same purpose by the Southern Pacific, Pacific Electric, and Union Pacific, but not now available to the Santa Fe.

Three Roads Dissent-The decision by the full commission was in Finance Docket No. 14639, with Chairman Rogers and Commissioner Miller dissenting. Commissioner Aitchison did not participate in the disposition of the case. The three roads now serving Long Beach opposed the application, as did unions representing Pacific Electric and Union Pacific employees. The city of Long Beach, the state railroad commission, and various interested parties supported the Santa Fe's proposal, as did organizations representing its employees.

The Santa Fe now serves that part of the Los Angeles harbor area known as Wilmington, a part of the city of Los Angeles, but does not enter the contiguous city of Long Beach, which has an independent harbor which, however, the commission's report observed, forms, together with the port of Los Angeles, "one continuous and extensive harbor area." extension will give the Santa Fe a physical connection with the Long Beach municipal trackage, whereas cars now handled by it and destined for piers or industries in Long Beach must be delivered to connections for movement to destination.

Military Necessity?-The Santa Fe asserted, but the other lines denied, that direct access to Long Beach is desirable, and possibly essential, in the furtherance of military operations in the Pacific; and that the proposed line and service would be of public benefit in promoting further development of Long Beach after the war." At present the Santa Fe delivers to the Harbor Belt Line, an agency in which all carriers serving a zone of the Los Angeles harbor area have unified their operations, at the so-called Pier A Yard, all cars for the entire harbor, including Long Beach, that are not delivered in interchange at other California junctions. As early as February, 1944, operations in Pier A Yard approached the point of congestion, and some delays have occurred in recent months. Almost all cars destined to shipside now

are delayed there in some measure. . . . With acceleration of military operations in the Pacific, it is anticipated that the volume of general cargo" moving through. the Los Angeles Port of Embarkation may increase from 2 to 21/2 times.

The port authorities favor any operating change that will relieve Pier A Yard of cars not destined to that immediate area, the commission noted, as they believe any measure that will assist in preventing congestion is desirable, and may be essential. "The carriers," it observed, "have given full cooperation, individually and collectively, in the effort to improve their terminal service, and generally their service has been good. But they have had a watchful eye to the future, and the military authorities believe that their solicitude to maintain the status quo has resulted in unnecessary confusion of operations in the harbor area."

Alternatives Suggested-Various expedients suggested by the other carriers for by-passing Pier A Yard were noted in the report, with the comment that the Santa Fe "naturally" finds all of them impractical and no basis for improvement of its situation. On the other hand, the Santa Fe suggested that a line of the Southern Pacific into Long Beach has very little traffic and is entirely adequate for its use, under trackage rights, along with the owning company, while the carriers opposing the Santa Fe application "contend that for various reasons this is impracticable, but the Southern Pacific's reluctance to grant such use to the applicant seems to be the most formidable barrier," the commission remarked.

Noting that it had already approved unification of terminal operations in the Los Angeles harbor area, including pooling of freight and earnings, but that this arrangement does not apply to Long Beach, although it was contemplated that it would be extended eventually to that port also, the commission found that "serious obstacles," which arise from desires of the carriers or other interests in conflict with its "primary desideratum" (a cessation of restrictions in service and discrimination in charges arising from differences in local terminal situations), prevent accomplishment of such full unification of terminal

facilities as it contemplated.

It held, therefore, that "direct access" of the Santa Fe to Long Beach, "and the resulting added competition provided thereby, will be in the public interest. Since the other carriers in the territory have failed to agree on trackage rights for the applicant over existing facilities, or for unified terminal operation, in order to obtain such access it is necessary that the applicant provide its own facility for the purpose, as proposed." A certificate authorizing the construction of the extension

(Continued on page 1080)

#### I. C. C. Is Overruled on Intrastate Fares

Supreme Court says interstate level was ordered without required findings

The Supreme Court of the United States has ruled in a five-to-four decision that the Interstate Commerce Commission improperly prescribed intrastate passenger fares in four southern states-North Carolina, Alabama, Tennessee and Kentucky-at the same level as intrastate fares, because its order "was not based on adequate findings, supported by evidence," as required by section 13(4) of the Interstate Commerce Act in instances where the commission asserts its authority over intrastate rates despite conflicting state orders as to the same

O. P. A. Wins Over I. C. C .- The majority opinion by Justice Black was in related cases in which the four states and their utilities commissions were joined by the Office of Price Administration and the Economic Stabilization Director as appellants and the Interstate Commerce Commission and railroads operating in passenger service in those states were named as defendants, the cases having been appealed from federal district courts which declined to issue injunctions against the enforcement of the commission's orders. Chief Justice Stone and Justices Roberts and Frankfurter joined in a dissent by Justice

The commission's orders (noted in Railway Age of May 20, 1944, page 1001) authorizing the railroads operating in the four states to charge 2.2 cents per mile for intrastate coach fares, despite state commission orders directing them to charge no more than 1.65 cents per mile, resulted from the railroads' application for authority to put such fares into effect under the provisions of the Ex Parte 148 decision allowing a straight 10 per cent increase in

passenger fares.

Four States Uncooperative-Following a comprehensive investigation of passenger fares throughout the nation, the commission in 1936, in its No. 26550 proceedings, found that a coach fare in excess of 2 cents per mile would be unreasonable and unlawful, but left roads in the South free to continue experimental fares which were as low as 1.5 cents per mile. The Ex Parte 148 order of January 21, 1942, applied a 10 per cent increase to all passenger fares then in effect. The southern roads subsequently (July 14, 1942) asked for authority to discontinue the experimental fares and to charge 2.2 cents per mile. The

## Union's Agreements Don't Bind Members

## Supreme Court says individual consent is required for grievance bargains

In a case involving "novel and important questions concerning the authority of a collective bargaining agent, affecting the operation of the Railway Labor Act of 1934," the Supreme Court of the United States this week ruled, in a five-to-four decision, that a National Railroad Adjustment Board award in a case having to do with employee grievances does not deprive affected employees from the right to ordinary court processes to obtain judgment if it can be shown that such employees had not specifically authorized the union designated as the exclusive bargaining agent to act in their behalf for such purposes.

Dissent by Frankfurter—The case—Elgin, Joliet & Eastern vs. Burley—reached the Supreme Court after the federal district court's finding that the adjustment board's award was a "final adjudication" of the claims within its power and not subject to judicial review had been reversed by the court of appeals, which held that a question of fact, whether the union had been authorized by the employees to negotiate and settle their grievance claims, had to be determined. The majority opinion of the Supreme Court was by Justice Rutledge, while Chief Justice Stone and Justices Roberts and Jackson concurred in the dissenting opinion by Justice Frankfurter.

As summarized in the opinions, the litigation grew out of an agreement of July 27, 1934, between the Brotherhood of Railroad Trainmen and the E. J. & E. involving, among other things, the starting time of certain switching crews at the road's Whiting, Ind., yard, operation of which it at that time took over from the Standard Oil Company, The employees concerned were members of the B. R. T. As the result of a dispute between the railroad and the union about the provision as to starting time, a complaint was filed with the adjustment board in 1936 to obtain a settlement of the controversy. No claim for money damages was made then. In October, 1938, before the complaint was heard by the board, a settlement was reached between the railroad and the brotherhood, and the case was removed from the board's docket. One provision of the settlement required withdrawal of such cases, and precluded subsequent filing of claims covering the same situations if arising before the date of the settlement.

Claims Despite Settlement—Later, however, (May 18, 1939) the union filed with the adjustment board a second complaint claiming money damages for its members totaling \$65,274, for alleged violations, prior to October, 1938, of the 1934 agreement. The First Division of the board formally denied the claim (September 6, 1940) on the ground that the 1938 settlement, accepted by the union, disposed of the claim, and the individual employees then filed suit for damages in the federal district

court. The claim for damages was based on the employees' view that they each were entitled to a day's pay at time and a half for each day they were required to work contrary to their understanding of the terms of the 1934 agreement with respect to starting time. The union asserted that the 1938 agreement was not retroactive and did not waive claims for prior damages, while the railroad relied on the settlement as precluding such claims.

In the Supreme Court, the employees denied that the union had authority to release their individual claims or to submit them to the adjustment board, quoting the brotherhood's constitution and rules to that effect. They also asserted that they had received no notice of the submission of their claims to the board, that it lacked authority to make a final award of damages, and that they had been deprived of due process of law. The "crucial question," according to the majority finding, however, was whether the adjustment board's 1940 finding was validly made.

Individual Bargaining Deprecated-The carrier contended, on the other hand, that the Railway Labor Act makes the collective agent of the employees their exclusive representative for the settlement of all disputes, whether major (that is, over the formulation or modification of collective agreements) or minor (dealing, that is, with grievances arising from the application of such agreements). This view, the court majority observed, "has been adopted, apparently, in the general practice, if not the formally declared policy of the adjustment board. And this, it seems, has been due to the position taken consistently by the employees' representatives on the board, over the opposition of the carrier representatives. The unions, apparently, like petitioner (the E. J. & E.) in this case, interpret the act as not contemplating two distinct systems for the settlement of disputes, one wholly collective for major disputes, the other wholly individual for minor ones. . . . Petitioner urges that the statute, both by its terms and by its purpose, confers upon the collective agent the same exclusive power to deal with grievances . . . as is given with respect to major And the aggrieved employee's rights of individual action are limited to the rights of hearing before the union and possibly also before the carrier.

The court majority, said Justice Rutledge, considers this view "contrary to the clear import" of the statute and the intentions of Congress. It concludes that the brother-hood had power as collective agent to make an agreement with the carrier, effective for the future only, with respect to the question of starting time, but that it does not follow that the carrier had the same right to deal with the union concerning the past. For the union to act in behalf of the individual claimants "with conclusive effect" it was essential that it have authorization therefor from them over and above any authority given by the statute.

More Litigation Required—The majority then turned to the question whether, as a matter of law, the employees involved had authorized the brotherhood to settle their claims, submit them to the board, and represent them in its proceedings. The

(Continued on page 1079)

## Approves Alleghany's C. & O. Lines Control

#### I. C. C. jurisdiction clarified; Pittston stock trusteed; litigation avoided

Division 4 of the Interstate Commerce Commission has approved and authorized the acquisition by Alleghany Corporation of control, through the ownership of stock, of the Chesapeake & Ohio, Pere Marquette, and New York, Chicago & St. Louis, and their subsidiaries and affiliates, and at the same time has discontinued proceedings in which C. E. Boles, assistant director of the commission's Bureau of Finance, had recommended a finding that such control had been acquired and was being exercised by Alleghany in violation of the Interstate Commerce Act.

Pittston Stock Trusteed—The division has thus accepted substantially a plan proposed by Allan P. Kirby, president of Alleghany, whereby the corporation would accept the commission's jurisdiction and would place the stock in the Pittston Company held by it and the C. & O., and also such stock of the Erie as the C. & O. held, under the control of trustees, provided that Alleghany's control of the C. & O. and the affiliated lines should be approved by the commission and the proceedings with respect to such control should be terminated without litigation. This proposal was outlined in Railway Age of March 31, page 605.

The report and order approving Alleghany's control of the C. & O. roads was in the Finance Docket No. 14692 proceeding, wherein the C. & O. on September 2, 1944, had asked authority to acquire the property of a wholly-owned subsidiary, the Norfolk Terminal & Transportation Co. Alleghany had joined in this application with a request for commission approval of acquisition of control of the terminal company by it, through its control of the C. & O., thereby opening the way for a commission ruling on the propriety of the relationship between Alleghany and the C. & O.

Sec. 5 (4) Violation Probe—Meanwhile, however, the commission on its own motion had undertaken an investigation, docketed as No. 29085, for the purpose of determining whether Alleghany's control of the C. & O. was acquired after the enactment, and therefore in violation, of section 5(4) of the Interstate Commerce Act, and extensive hearings had been held in that proceeding (as reported in *Railway Age* of August 5, 1944, page 245, and previously).

The investigation proceedings were rendered moot by the findings in the terminal case, however, the division held, and No. 29085 has been discontinued, except that jurisdiction was retained to make any order that may hereafter be found appropriate. No finding has been made, therefore, as to the principal point at issue in the investigation proceedings, that is, whether Alleghany's control of the C. & O. had been continuously maintained since it was acquired, or, if interrupted, whether it had been regained before September 18, 1940

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Boles Is Reversed-The proposed report of Mr. Boles (outlined in Railway Age of March 10, page 460) dealt with both the investigation proceeding and the finance docket case, and recommended that (1) the C. & O. be authorized to acquire the terminal company, that (2) Alleghany's application for authority to acquire the terminal company through its control of the C. & O. be dismissed, and that (3) Alleghany, Robert R. Young and Allan P. Kirby, who together hold about 28 per cent of Alleghany's common stock, and the C. & O. should be required to "take such steps as may be necessary . . . to prevent a continuance" of the allegedly unlawful maintenance of control of the C. & O. by Alleghany. Alleghany's proposal to the commission that its control of the C. & O. be approved, subject to putting its Pittston stock in the hands of a trustee, was suggested as a means of meeting this require-

The division pointed out in its report that Alleghany's actual ownership of C. & O. common stock recently had declined substantially, so that it now amounts to about 7.92 per cent of the total outstanding. It exercises control of the C. & O. through that stock and the support of other stockholders at elections of directors. The C. & O. has been exercising control of the Nickel Plate and Pere Marquette since 1937 and 1929, respectively, under commission authority, while control of the Wheeling & Erie is held by the C. & O. roads, subject to a voting trust. Alleghany's proposal, which in effect the division has accepted, limits its control of carriers to these roads and their subsidiaries, subject to its right to seek commission approval hereafter for the acquisition of control of other carriers.

Other Alleghany Holdings-Alleghany does not now own stock of any other carrier, according to the report, except the Missouri Pacific (which does not represent any voice in the management of that road, now in process of reorganization). It exercises control of the United States Trucking Corporation through its ownership of Pittston Company stock, but by depositing such holdings in trust, as provided in its plan and directed by the division, it will 'effectively divest itself" of such control without sacrificing the intrinsic values in this stock, the division found. Alleghany is required also to deposit in trust any voting stocks of other carriers it may hereafter acquire, except those already included in the C. & O. group.

To prevent Alleghany from acquiring indirect control of any other carrier through the C. & O., that road is required, in line with the plan submitted to the commission, to deposit in trust its holdings of voting stocks of the Erie (amounting to 46,700 shares of common and 259 of 5 per cent preferred) and of Pittston, as well as of any carrier, outside its own system, which it may hereafter acquire. Alleghany had indicated its intention to acquire or sell securities of other carriers from time to time, but it agreed that it would not acquire control of any other carrier, so long as it controls the C. & O. and its affiliates, except upon commission approval.

In its report the division approved the trust agreements covering deposit of Alleghany's and C. & O.'s Pittston stock with the Empire Trust Company as independent voting trustee and of C. & O.'s Erie stock, as well as any stock of any non-affiliated carrier subsequently acquired either by Alleghany or C. & O., with the Chase National Bank as independent voting trustee.

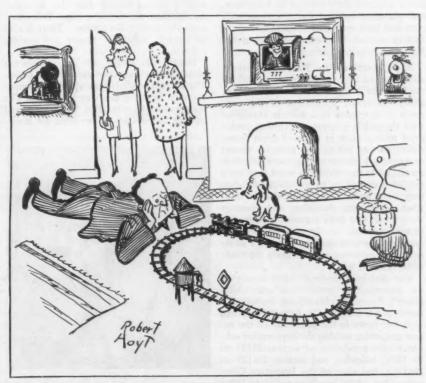
Trust Provisions-The trust provisions vest in the trustees the sole right to vote the affected stocks for the election of directors and on managerial questions submitted to the stockholders by the directors, but leave to Alleghany and the C. & O. the right to vote the stocks owned by them on "those matters normally pertaining to the intrinsic investment value of the stocks. such as mergers, consolidations, sale or sales of all or substantially all of the assets, changes in the terms or priorities of stocks, and matters of similar import." The division also required the resignation of three Pittston directors from their directorships in railroads in the C. & O. group, thus eliminating interlocking directorates involving companies whose stocks are deposited under the trust agreements.

The report noted that Alleghany had indicated that its proposals to deposit these stocks with trustees are not to be construed as an admission that its continued control of Pittston and through it of United States Trucking is in violation of the law or inconsistent with the public interest. It had presented evidence to show that continuance of its control of the C. & O. and affiliated railroads would be in the public interest, and the report reviewed Alleghany's relationships with these carriers in the light of the "public interest in the main-

tenance of an adequate rail transportation system."

Financial Structure Improved-The division pointed out that Mr. Kirby and Mr. Young had acquired their interest in Alleghany in 1937, and that since then Alleghany has made progress in improving its financial structure and is now in a position where its financial requirements are being met entirely out of its own resources, without resorting to financial assistance from any of the controlled carriers. For the period 1937 to 1943, inclusive, it added, the three principal railroads in the C. & O. group reduced their non-equipment debt by 19.4 per cent, as compared to a reduction of 5.4 per cent by all other Class I roads not in reorganization, and reduced their original obligations by 0.09 per cent, as compared to an increase of 41.5 per cent for all Class I roads in the same period. The annual interest requirements on publicly held debt of the three roads was reduced in that period by 26 per cent.

"The testimony is that the present management of Alleghany has been very much interested in the operating efficiency and character of public service rendered by the Chesapeake & Ohio, Nickel Plate, and Pere Marquette," the division observed. "The record shows that the 3 railroads are today operating at a level of efficiency higher than that of the average of Class I railroads as a whole, and that all three have constantly kept ahead in this respect for at least the past 12 years. This performance is attributed principally to the fact that large sums of money have been judiciously expended for improvements to the physical properties for the purpose of increasing the capacity of the railroads and the efficiency



"He's been like this ever since he got that Diesel job."

of their operations, and to the fact that the type of management installed and maintained has been consistently efficient, alert, and forward looking."

Alleghany Assets—According to the report, the total of the book assets of the three roads at the end of 1944, excluding intercorporate holdings, was \$1,301,103,665. Alleghany's total book assets, as of June 30, 1944, were \$79,888,316, while the total claim of its preferred stocks, including accumulated dividends, was \$118,932,395, leaving a deficiency of about \$17.40 per share for the common stock. While the record was silent as to the investment made by Mr. Young and Mr. Kirby in acquiring their interest in Alleghany, their holdings had a market value, at the time of the 1944 hearing in the investigation proceeding, of about \$3,750,000.

Continuing its comment, the division remarked that "while the Chesapeake & Ohio and its subsidiaries appear to have benefitted from their relationship with Alleghany since Young and Kirby acquired their interest in that corporation, not all of the benefits claimed can be attributed to that relationship. . . . The capital structure of Alleghany and of the rail carriers had improved greatly since Young and Kirby acquired their stock interest in Alleghany. Not all the credit for this improvement, however, can rightfully be ascribed to Alleghany's management. Much of it has been made possible by the improvement in earnings of the railroads resulting from war traffic and by the accompanying rise in the market values of securities. Nor can the present Alleghany management claim all the credit for the efficient and satisfactory transportation service rendered by the three railroads. Much of the improvement in their physical plants occurred before Young and Kirby acquired their interest in Alleghany, and witnesses testified that the three carriers had been rendering efficient and satisfactory service for periods beginning before they acquired their interest."

Bad Practices in Past—The report also observed that "we should not overlook the fact that Alleghany in the past has not always exercised its control of the railroads in its system in a manner consistent with the public interest. Alleghany, under prior management in times of great financial stress and for its own purposes caused or permitted carrier corporations which it controlled to pay dividends when they were not being earned, or to pay dividends when they were under a heavy burden of debt, when traffic was declining, and earnings were decreasing notwithstanding scrimping of maintenance. . . . In view of more recent developments and of the present situation, such practices are not likely hereafter to be resorted to."

The division's findings with respect to the commission's jurisdiction over Alleghany's financial transactions, including a requirement that it file financial reports, were set forth in the provision of the report and order making the corporation subject to the provisions of section 20(1) to 20 (10), inclusive, and section 20a(2) to 20a(11), inclusive, of the Interstate Commerce Act. Alleghany's proposal to bring the proceedings to a conclusion had recognized the commission's authority to make

its approval of control subject to the condition that Alleghany should be subject to those sections of the act that the commission might designate.

#### Budd Announces New "Cabin Car"

The Edward G. Budd Manufacturing Company has just announced a new design of all-room railway sleeping car to be known as the Cabin Car. The car will be a standard 85-ft. sleeper with a body of Budd stainless-steel construction. Hightensile stainless steel will also be used for the main structural members. The car will have 22 rooms, all on one level. The beds, which are 6 ft. 4 in. long and 2 ft. 11 in. wide, are lowered into place and returned to their daytime positions electrically by the flick of a switch. The bed frames on which the springs are mounted are lightweight magnesium stampings, and the mattresses 4-in. foam rubber. When the bed is in place for the night, a night table, a case for valuables, and a combination bed and night light are conveniently located adjacent to the head of the bed.

There is a deeply cushioned, unusually wide, adjustable chair-type seat with large overstuffed club-type arm rests and a curved head rest for day occupancy. With the arm rests folded two people may occupy the seat. The upholstery is foam rubber. A clothes closet, toilet, and folding wash basin are fitted into the aisle wall of each room. Baggage space on the end wall opposite the seat will accommodate a fullsize suit case. In this doorway opposite the seat is a shoe locker. The top of the toilet, arranged as a second seat, is upholstered to match the chair. The wash basin, of stainless steel, is operated by a finger bar in the handle. Over the basin is a locker with a spring-hinged door for a water carafe, glass, and drinking cups. Below this is an alcove for toilet articles. There is also an electric outlet for razors and curling

Heated or cooled air for ventilation passes through an overhead diffuser outlet. The amount of air is regulated by a damper operated from the doorway by a knob. The temperature is controlled by heating and cooling thermostats. Floor-level air is cir-



Space at the Sides of the Room Is Utilized for Clothes Locker and Lavatory in the Budd Cabin Car

culated by a fan over a heating coil which eliminates the conventional radiator under the window.

General indirect illumination is provided by a semi-circular fluorescent tube concealed behind an overhead air diffuser fixture. Fluorescent tubes are placed on either side of the mirror frame. Additional light for reading on dull days comes from a spotlight in the center of the air-diffuser fixture. A reading light for use when the bed is lowered is located on the end wall at the head of the bed. A blue night light above the doorway shines on the ceiling and indirectly lights the room. A switch in the doorway controls all lights.

A concealed door is supported by roller tracks at the top and two lateral rollers at the bottom which are hidden in the doorway, eliminating any lower door guide which would accumulate dirt and jam action. A brake holds the door in any desired position. A zipper closes the curtain attached to the outer face of the room.

The wainscoting is covered with material which aids in sound deadening and gives a clean surface which is not easily scratched or marred. The sides above the wainscoting may be painted directly on the metal or covered by simulated leather cemented over a thin layer of felt which, in turn, is cemented to the panel.

Other features include sound-deadening construction; round corners for ease in cleaning; centralized mechanism and plumbing completely accessible through a removable panel in the aisle. At the vestibule end there is a baggage locker, a regulator and control locker, and space for linen storage. At the blind end of the car is additional space for linen storage as well as toilet and porter accommodations.

The Cabin Car is intended to satisfy the need for private individual day-and-night accommodations, with every possible comfort, at a nominal cost. It will be followed by other all-room sleeping cars of new designs.

#### Would Give Truman Broad Reorganization Powers

President Truman would get practically all he is seeking in the way of unrestricted authority to reorganize government agencies under the terms of S. 1120, which was introduced in the Senate last week by Senator Overton, Democrat of Louisiana, for Senator McCarran, Democrat of Nevada. While no cabinet department could be entirely eliminated, the General Accounting Office would be the only agency exempt from the proposed revamping power which would otherwise apply to executive department, commission, independent establishment, corporation owned or controlled by the United States, board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the government . . ."

This McCarran proposal is the second bill introduced in response to the President's recent message. As noted in the Railway Age of June 2, page 992, the first was H. R. 3325 (introduced in the House by Representative Manasco, Democrat of Alabama) which would exempt 21 agencies, including the Interstate Commerce Commission, National Mediation Board,

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#### Selected Income and Balance-Sheet Items of Class I Steam Railways

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Compiled from 132 reports (Form IBS) representing 136 steam railways (Switching and Terminal Companies Not Included)

		All Class I	Railways	
	For the mon	th of March	For the three months of	
Income Items	1945	1944	1945	1944
Net railway operating income     Other income     Total income     Miscellaneous deductions from income.     Income available for fixed charges.	. 14,052,070 . 113,936,639 . 2,878,297	\$93,853,325 13,932,955 107,786,280 2,826,734 104,959,546	\$246,063,084 43,543,520 289,606,604 7,509,995 282,096,609	\$266,065,752 41,933,415 307,999,167 8,202,842 299,796,325
6. Fixed charges: Rent for leased roads and equipment. Interest deductions Other deductions Total fixed charges 7. Income after fixed charges 8. Contingent charges 9. Net income	32,469,386 108,909 45,412,328 65,646,014 2,715,380	12,624,021 34,646,443 149,010 47,419,474 57,540,072 2,369,747 55,170,325	37,427,191 96,919,484 323,291 134,669,966 147,426,643 8,071,238 139,355,405	36,936,274 103,748,272 388,952 141,073,498 158,722,827 7,103,619 151,619,208
Depreciation (Way and structures an Equipment)     Amortization of defense projects     Federal income taxes     Dividend appropriations:	d 27,614,704 19.647,509	26,309,029 15,650,606 113,622,318	82,450,419 57,758,926 285,605,430	79,228,827 43,169,947 306,195,081
On common stock On preferred stock Ratio of income to fixed charges	. 385,318	5,408,869 697,906 2.21	23,785,315 5,726,435 2.09	25,588,425 5,778,034 2.16

	And of media to med charges 2,73	All Class 1	Railways
		Balance at en	nd of March
	Selected Asset and Liability Items Expenditures (gross) for additions and betterments—Road	1945 \$46,365,667	1944
19.	Expenditures (gross) for additions and betterments—Equipment Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	65,298,304 569,369,944	\$589,570,373
20.	Other unadjusted debits	474,423,702	446,288,533
22. 23. 24. 25. 26. 27. 28. 29.	Cash Temporary cash investments Special deposits Loans and bills receivable Traffic and car-service balances—Dr. Net balance receivable from agents and conductors Miscellaneous accounts receivable Materials and supplies Interest and dividends receivable Rents receivable Other current assets	1,031,808,186 1,772,849,836 210,628,540 411,074 57,450,644 136,731,561 644,438,596 614,141,641 32,628,373 2,333,789 51,675,973	1,010,757,439 1,757,334,512 190,182,488 245,454 54,165,478 149,229,952 678,452,713 569,754,980 23,086,180 1,834,411 55,234,290
32.	Total current assets (items 21 to 31)	4,555,098,213	4,490,277,897
40.	Funded debt maturing within 6 months <sup>3</sup>	114,131,985	106,203,683
42. 43. 44. 45. 46. 47. 48. 49. 50.	Loans and bills payable Traffic and car-service balances—Cr. Audited accounts and wages payable Miscellaneous accounts payable Interest matured unpaid Dividends matured unpaid Unmatured interest accrued Unmatured dividends declared Unmatured rents accrued Taxes accrued Taxes accrued Other current liabilities	11,485,000 192,822,493 417,772,664 205,073,296 75,037,981 14,795,491 59,157,591 13,169,126 23,808,149 1,630,469,933 155,910,738	14,937,426 208,654,998 493,487,850 130,154,151 67,282,823 17,570,073 59,098,457 10,643,290 22,181,171 1,720,574,210 108,627,832
52.	Total current liabilities (items 41 to 51)	2,799,502,462	2,853,212,281
	Analysis of taxes accrued: U. S. Government taxes Other than U. S. Government taxes Other unadjusted credits	1,492,364,484 138,105,449 663,769,755	1,580,292,503 140,281,707 474,213,182

<sup>1</sup>Represents accruals, including the amount in default.

<sup>2</sup>Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.

<sup>a</sup>This item was previously designated Accrued Tax Liability.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission.

Subject to revision.

National Railroad Adjustment Board, and Railroad Retirement Board. The exemptions in the Manasco bill are like those embodied in the 1939 legislation which gave the late President Roosevelt restricted reorganization authority on a temporary

The principal change effected by President Roosevelt was the transfer of the former Civil Aeronautics Authority to the Department of Commerce where it has been split into the Civil Aeronautics Board and the Civil Aeronautics Administration. Last week another bill (H. R. 3423) to reestablish the C. A. A. as an independent agency was introduced in the House by Representative Halleck, Republican of Indiana. Meanwhile Congressional leaders were reported last week-end to have advised the President that Congress, hoping

for a summer recess, is not disposed to get into the government agency reorganization matter until next fall.

#### High Taxes Curb C. N. J.'s Efforts for Better Service

In an address before the Plainfield, N. J., Lions Club on June 13, Ralph E. Thompson, property manager of the Central of Jersey lines, disclosed that the financiallybankrupt railroad would like to install some Diesel-electric passenger locomotives for commuter service "if we can figure out a way to pay for them." He declared that "the taxes we are paying make it difficult, if not impossible, to make needed improvements in Plainfield and other cities along our line. Even with record wartime earnings, in which we did \$124,000,000 of business in 1943 and 1944 combined, our net

income totaled only \$930,792 after we paid all our expenses and New Jersey taxes of about \$9,240,000. Where will this leave us when traffic goes back to peacetime levels, as it is doing? There is a strong possibility that we may not be able to show any earnings at all for this year, and no one knows what will happen in the future."

Mr. Thompson said it might be possible for the company to acquire some Diesel locomotives if commuters were agreeable to paying more for their service, and if some solution of its tax problems, past and present, could be found. He pointed out that the road's commuter rates generally are lower than on any other railroad serving New York.

#### Mexican Strike Called Off

A threatened strike which would have completely tied up sleeping car service in Mexico was called off last week by Mexican labor unions after a compromise settlement was announced by the Pullman Company. The settlement resulted from negotitations carried on by Pullman officers after the unions involved suddenly broke off discussions on June 2 and issued a 10day walkout notice.

#### Freight Forwarder Insurance

Interstate Commerce Commission rules and regulations for freight forwarders, in the matter of filing of surety bonds, insurance policies, qualifications as self-insurers, or other securities, will become effective July 2, the commission having denied a petition of the Freight Forwarders Institute for a further postponement. The denial came in a June order in Ex Parte No. 159.

#### Bill Proposes Tax Relief for Air Lines

Representative Bulwinkle, Democrat of North Carolina, has introduced H. R. 3446, which he describes as "a bill to provide for the avoidance of multiple taxation of air commerce." It would carry into effect recommendations made by the Civil Aeronautics Board in its recent report on state taxation of air carriers (see Railway Age of April 14, page 674).

#### Destruction of Records

In the interest of the paper salvage campaign the Interstate Commerce Commission, as noted in the Railway Age, May 26, 1945, page 924, recently modified its requirements in such a way as to permit the destruction of securities by pulping rather than by cremation. This still presented some difficulties, because each individual railroad would be required to designate a cremation committee to insure that the documents are destroyed by reducing to pulp in mills which are located some distance from the fiscal centers.

Because most of the large railroads have fiscal agents in New York City, the director of the Bureau of Accounts of the I. C. C., ruled that until the close of business December 31, 1945, "In lieu of individual compliance with section 110.6 of the Commission's regulations governing the destruction of records of steam railroads, issue of 1945, and effective on June 1, 1945, steam railroads having fiscal agents or

trustees of mortgages in New York City through whom securities are retired are, if desirable, authorized to appoint a single leading banking institution in New York City as their agent to represent the trustees of mortgages of steam railroads in authenticating individual certificates of committees for destruction of documents consisting of retired securities.

'The intent of this interpretative authority is to permit the railroads, which clear their securities through representatives in New York City, to designate one agent to act for all carriers to which these regulations are applicable, for the purpose of facilitating the salvaging of paper."

#### North Western Tests Radio

The Chicago & North Western is conducting a series of tests to determine the practicability of radio communication be-tween switch engines and the yardmaster's office in Milwaukee, Wis. In addition, tests will be made with radio-telephone communication between the locomotive cab and the caboose on long freight trains in main line service. The radio equipment, furnished by the Bendix Corporation, operates at a frequency of 156 megacycles.

#### New England Little Affected by Class Rate Decision

"The increased cost to New England manufacturers on the freight charges of that part of the traffic moving on class rates between New England and points in eastern territory will be less than one per cent," Howard S. Palmer, president and trustee of the New Haven stated, in commenting on the recent Interstate Commerce Commission class rate decision. And, "to offset this," Mr. Palmer explained, "the freight charges on that part of the traffic which moves on class rates to and from points in the South and West will be reduced 10 per cent."

Since rates generally increase with greater distance, New England industry "will continue to have an advantage compared with other sections of the country because of its proximity to the great centers of population," Mr. Palmer declared. He pointed out that less than 6 per cent of all traffic between points within eastern territory move on class rates and the other 94 per cent on commodity rates.

#### Club Meetings

"Protecting Railroad Property During the War" will be discussed by Frank G. Love, superintendent of property protection of the New York Central, when the New York division of Railroad Enthusiasts. Inc., meets June 27, at 8 p. m. in Grand Central terminal, New York. In addition, motion pictures will be shown, including one of an early railroad fan trip over the Hoosac Tunnel & Wilmington.

#### Pullman Needs More Men to Meet New Emergency

Providing sufficient man-power is recruited within the next few weeks, the Pullman Company can meet the new Army demands created by the switching of war traffic from East to West, according to a statement issued by James M. Carry, vicepresident of Pullman. The two major problems facing the company are (1) the transportation of thousands of wounded men and (2) the "redeployment" of troops to the Pacific and points of discharge.

"We can meet the new emergency," Mr. Carry said, "provided we obtain adequate man-power for necessary maintenance of our equipment, and additional forces to man and operate the present fleet of cars and the 1,200 government-owned sleeping cars now on order."

During the four war years a total of 27,000,000 troops have traveled in mass movements in Pullman cars.

#### Freight Car Loading

Loadings of revenue freight for the week ended June 9 totaled 884,285 cars, the Association of American Railroads announced on June 14. This was an increase of 46,765 cars or 5.7 per cent above the previous week, an increase of 11,111 cars or 1.3 per cent above the corresponding week last year, and an increase of 29,799 cars or 3.5 per cent above the comparable 1943 week.

Loading of revenue freight for the week ended June 2 totaled 837,520 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week	Ended	Saturday,	June 2
District	1945	1944	1943
Eastern Allegheny Pocahontas Southern Northwestern Central Western Southwestern	151,699 183,623 53,677 126,265 122,519 125,359 74,378	186,574 54,951 119,336 121,284 112,576	125,752 140,624 20,141 101,840 115,227 101,604
Total Western Districts	322,256	303,403	279,252
Total All Roads	837,520	810,698	667,609
Commodities Grain and grain products Live stock Coal Coke Forest products Ore Merchandise I.c.l. Miscellaneous	48,513 12,850 160,811 14,762 43,617 72,309 100,818 383,840	37,107 12,655 168,655 14,671 39,371 79,563 97,203 361,473	12,104 41,277 11,420 41,431 74,655 90,959
June 2 May 26 May 19 May 12 May 5	837,520 882,437 868,634 838,507 863,399	810,698 868,821 870,075 867,182 835,538	853,783 843,842 849,032

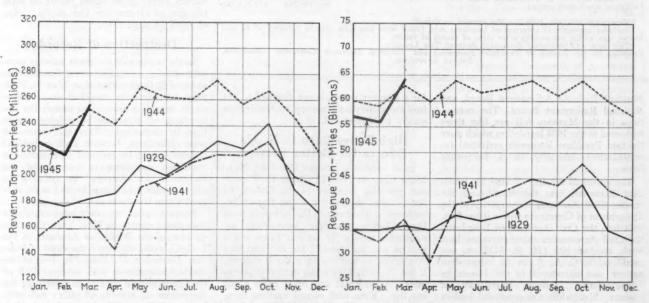
Cumulative Total.

. 17,734,803 17,757,013 16,995,593 22 Weeks In Canada.—Carloadings for the week ended June 2 totaled 74,296 as compared with 70,242 for the previous week and 70,579 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada: June 2, 1945 June 3, 1944	Total Cars Loaded 74,296 70,579	Total Cars Rec'd from Connections 37,304 37,210
Cumulative Totals for C June 2, 1945	1,470,472	814,580 871,857

### Schwartz Again Heads N. M. B.

Harry H. Schwartz, who has served as chairman of the National Mediation Board since July 1, 1944, has been designated by the board to continue in the chairmanship for the next fiscal year beginning July 1. The board's general policy has been to rotate the chairmanship annually among its three members and this exception in the case of Mr. Schwartz is understood to



Revenue Tons and Revenue Ton-Miles-1945 Compared with 1929, 1941 and 1944

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Mr. L livan, Boren, Hinsh: have been due to the fact that he is also chairman of the National Railway Labor Panel which was created by the late President Roosevelt to provide wartime procedures whereby railway labor organizations may have emergency boards appointed without the necessity of taking strike votes.

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#### Car Building Industry Gets W. P. B. "Urgency" Rating

In a move "to overcome a lag in freight car production that is handicapping the nation's railroads as they face their heaviest war burden," the War Production Board this week placed the entire freight car building industry, the entire railroad brake shoe manufacturing industry, the entire chilled railroad car wheel manufacturing industry and certain malleable iron and steel foundries manufacturing components for locomotives and freight cars on the National Production Urgency List.

The W.P.B. announcement explained that the action provides plant urgency ratings "of the third band or better" for 112 plants located in 17 states, and will "open the way for similar elevation in man-power ratings." Generally speaking, it added, only "direct military producers"

have higher ratings.
"W.P.B. officials," as the press release put it, "explained that their decision was based on surveys that indicated that the mounting car shortages might constitute a serious threat to both war and civilian shipments by late summer and remain so during the fall and winter months." The current shortage "is somewhat more than 10,000 cars, according to the most recent figures," the release added.

#### Names Three House Interstate Commerce Subcommittees

Subcommittees on transportation, aviation, and petroleum have been appointed by Chairman Lea of the House committee on interstate and foreign commerce. Although other subcommittees may be appointed to deal with particular bills, the general plan under the new set-up is to refer transportation bills to the transportation subcommittee, except where they involve aviation or petroleum, when they will go to the aviation or the petroleum subcommittee.

Members of the transportation subcommittee include Chairman Lea, who is also chairman of the subcommittee, Representatives Crosser of Ohio, Bulwinkle of North Carolina, Boren of Oklahoma, Priest of Tennessee, Harris of Arkansas, Sadowski of Michigan, Democrats; Wolverton of New Jersey, Holmes of Massachusetts, Reece of Tennessee, Halleck of Indiana, and Brown of Ohio, Republicans.

Representative Bulwinkle is chairman of the aviation subcommittee, which also includes Messrs. Lea, Boren, Priest, Wolverton, Holmes, and Halleck; and Representatives Chapman of Kentucky, Beckworth of Texas, Harless of Arizona, Kelly of Illinois, Rogers of Florida, Democrats; Hinshaw of California, Howell of Illinois, and O'Hara of Minnesota, Republicans.

The petroleum subcommittee, headed by Mr. Lea, also includes Representative Sullivan, Democrat of Missouri and Messrs, Boren, Harris, Kelly, Wolverton, Holmes,

Hinshaw and Brown.



Photo by Tommy Weber

#### Chinese Railway Officers at Waldorf-Astoria Reception

Left to right: Mr. Mao; Tseh-chuan New, chief mechanical engineer, Hunan-Kwangsi Ry.; Edward J. Cunningham, International Railway Supply Co.; Ying-ping Wang, representative in Burma for the Directorate of the Yunnan-Burma Ry.; En-tao Shen, traffic manager, Hunan-Kwangsi; Hai-ping Chang, vice director and chief engieer, Yunan-Burma; and Fatuan Li, director of stores and purchases, Canton-Hankow Ry., the Hunan-Kwangsi and the Kwangsi-Kweiyang.

#### Chinese Transportation Men Inspect U.S. Railroads

Spurred by the recent recapture of several key Chinese railroads, China's Ministry of Communications now has in this country 14 transportation men inspecting American railroad facilities and railroad equipment industries

Headed by E. S. Mao, superintendent, Liukiang Locomotive & Car Works, the group last week met in New York with representatives of the China-America Council of Commerce & Industry. While characterizing China's railroad needs now as "urgent," Mr. Mao told this industrial and financial organization that the "principal objective of this mission is to plan for the Although the delegation is infuture." vestigating the possibility of obtaining immediate delivery of surplus equipment from American railroads, Mr. Mao emphasized the Chinese are interested in every modern development of American railroading.

Present plans call for constructing 20,000 miles of railroad in the next 10 years. The delegate explained that to equip that new mileage "we shall need at least 4,000 locomotives and 30,000 cars, in addition to a minimum of 3,000,000 tons of steel rails." Motive power and rolling stock will have the standard coupler height of American railroads, and all new lines will be standard gage. "By using American standards, we hope to obtain speedier delivery of the equipment that we need," Mr. Mao added.

#### Mine Workers' Affiliate Wins Erie Marine Employees

Licensed and unlicensed deck personnel and marine engineers, firemen and oilers employed in the Erie's marine department have chosen the Railway Workers Industrial Union, District 50, United Mine Workers of America, as their collective bargaining representative under the Railway Labor Act, according to results of recent elections which have been certified by the National Mediation Board. These victories follow upon the same union's recent success in winning the right to represent Western Maryland locomotive engineers, firemen, hostlers, and hostler helpers (see Railway Age of May 26, page 952).

The Erie's licensed and unlicensed deck personnel were formerly represented by the National Organization Masters, Mates and Pilots of America, which the Mine Workers' affiliate defeated by a vote of 95 to 72. It won the marine engineers, firemen and oilers when it got 87 votes to seven for the Railroad Marine Workers Local 933-5, International Longshoremen's Association, which formerly represented those employees

The United Mine Workers, however, did get a recent setback on the Kelly's Creek where its District 17 has been supplanted by the Brotherhood of Railroad Trainmen as representative of coal dock laborersswitchtenders and foremen (river tipplemen). The U. M. W., claiming that the Mediation Board was without jurisdiction in this case, refused to participate in the

#### Georgia Balks at Filing a Bill of Particulars

A reply asking the Supreme Court of the United States to deny the motions of the defendants asking for a "bill of particulars" has been filed by the state of Georgia in the suit in which the state alleges injury from "collusive acts" of the railroads in violation of the anti-trust laws. As reported in Railway Age of June 2, page 992, the defendant roads asked for a clarification of the allegations made in the state's amended complaint and reference to specific rates, made by rate bureaus, which actually constituted discrimination against Georgia or resulted in concrete damage to the state or its ports or shippers.

The railroads' motions, the reply brief said, are, in their entirety, "tainted by unreasonableness and extravagance. present an unlimited and unrestrained effort to require a complete disclosure by the state of its proof prior to the trial of the suit regardless of whether the evidence is known to the defendants or is available to them. The true purpose of defendants, as illustrated by their numerous demands for evidence, is not to obtain an amplification of the pleadings essential to answer, but rather to ascertain what evidence the state possesses and to limit its proof at the trial."

The state asserted that it is "impossible," when the cause of action consists of an alleged "conspiracy which is continued over a period of years, and which is effectuated by a continuing course of conduct and not by an isolated act or even a short series of acts," to plead the cause with more particularity. It is "not the office" of a motion for a bill of particulars, the reply brief continued, "to elicit minute details involving complete disclosure of plaintiff's evi-

dence prior to trial."

As to the defendants' request for a showing that they intended purposely to conspire or discriminate against Georgia or its people, the reply said, "the question of intent... to conspire... is immaterial under the allegations of the complaint. This case is brought under the anti-trust laws and clearly shows an actual restraint or monopoly on the part of these defendants. It is only in those cases where the proof or allegations come short of showing an actual monopoly or restraint that intent may become necessary to characterize the acts done as unlawful."

#### I. C. C. Is Overruled on Intrastate Fares

(Continued from page 1071)

commission ruled that its No. 26550 decision permitted all roads, including the southern roads, to charge 2 cents per mile, and that a general increase of 10 per cent in these rates had been authorized in Ex Parte 148. On August 1, 1942, it modified its Ex Parte 148 to effectuate this increase in southern fares.

The southern roads then asked the individual state commissions for authority to increase intrastate fares accordingly. On the refusal of the four state commissions to authorize these increases, the carriers applied to the I. C. C. for relief, and its order of May 8, 1944, resulted. This order "requires the application of a basis no lower than their present interstate basis to intrastate fares, notwithstanding the refusal of the state rate authorities to authorize a similar application." Thus the issue before the Supreme Court was essentially a clash between the state and federal agencies as to the paramount power to fix intrastate fares.

States' Position Inadequately Examined—Section 13(4) of the act empowers the I. C. C. to prescribe intrastate rates, despite conflicting state orders, as Justice Black explained the statute, on condition that it "shall hold a 'full hearing' and find that the state-prescribed rates either caused (1) undue or unreasonable advantage, preference, or prejudice, as between persons or localities in intrastate commerce on the one hand, and interstate commerce on the other hand, or (2) undue, unreasonable, or unjust discrimination against interstate commerce."

In these cases, Justice Black continued, "the commission held hearings which are challenged on various grounds as falling short of 'full' hearings. It made findings and concluded that the 1.65 state rate was unduly prejudicial to interstate passengers, and that the state rate constituted an undue and unjust discrimination against interstate commerce. These conclusions are attacked on the ground that they are supported neither by finding or evidence. The crucial question involved in all these contentions is whether the indispensable prerequisites to the exercise of the federal commission's power over intrastate rates have been shown to exist with sufficient certainty." It was the majority's opinion that they were not.

State's Jurisdiction Defined — A state's power over intrastate rates, Justice Black went on to say, "is exclusive up to the point where its action would bring about the prejudice or discrimination prohibited by [section 13(4)]. When this point—not always easy to mark—is reached, and not until then, can the Interstate Commerce Commission nullify a state-prescribed rate." Whether or not the commission had found, on adequate evidence, that this point had been reached was, then, an essential element in the litigation.

The commission's findings, which in the majority's opinion "failed to give adequate support to the order" overruling the state commissions, were, as summarized in the opinion, "that the interstate 2.2 cents rate was just and reasonable; that the accommodations afforded interstate and intrastate passengers . . . were 'substantially similar'; that in general these passengers traveled in the same trains and the same cars; and from these, it concluded that since interstate passengers were forced to pay higher fares than intrastate passengers, there was an undue and unreasongers, there was an undue and unreasongers.

able disadvantage and prejudice of inter-

state passengers.

Uniformity Can't Be Arbitrarily Ordered-If Congress had intended to provide for complete uniformity in interstate and intrastate rates, the majority held, it could easily have made the statute require that intrastate rates shall never be lower than interstate rates. The Supreme Court previously, in the Wisconsin Railroad Commission vs. Burlington case, 257 U. S. 563, refused to sustain a commission order, based on this principle of uniformity, nullifying state passenger rates, Justice Black noted, and again the court takes the position that the finding that interstate passengers paid higher fares than intrastate passengers for the same facilities is an "inadequate support" for nullifying state rates on the ground of discrimination against interstate passengers.

As to the question of discrimination against interstate commerce as such, the majority held the commission's conclusion that in instance intrastate traffic was "not contributing its fair share of the revenue required" to enable the railroads "to render adequate and efficient transportation service" would justify the order overruling the state commissions, "if based on findings supported by evidence." But, it said, "the commission made no findings as to what contribution from intrastate traffic would constitute a fair proportion of the railroads' total income. It made no finding as to what amount of revenue was required to enable these railroads to operate efficiently. Instead, it relied on the mere existence of a disparity between what it said was a reasonable interstate rate and the intrastate rate fixed" by the state commissions.

1.65 Cents May Be a Fair Rate—Aside from the fact that the "mere existence of a disparity" does not warrant the commission's order, said Justice Black further, there is a reasonable doubt as to whether the commission ever fixed 2.2 cents

as "the only reasonable interstate rate."
"The commission might have found, had it made any findings on the subject at all, that a 1.65 cents rate... would have been a fair coach passenger contribution to revenues required" for profitable and efficient operation. "But it made no findings on this subject at all... Without such findings supported by evidence, the commission was not authorized to find that the intrastate rates discriminated against interstate commerce."

Reviewing the recent history of passenger fare investigations by the commission, Justice Reed in his dissenting opinion took the position that the case in dispute is "but another step in the comprehensive regulation by the commission of the general passenger fare structure," and not "an iso-lated investigation . . . into an application by the carriers in the four states to have their intrastate fares raised." The finding in the No. 26550 case that the southern experimental fares were "not unreasonable or otherwise unlawful," he said, obviously 'was to make clear that the current lower rates of the southern carriers were not disapproved. It cannot be read . . . as a requirement that the southern carriers should continue to apply this lower basis to their passenger fares. . . . Lower fares were 'discretionary.' . . . A national interstate basis schedule, universally applicable, was established by the report and order in docket No. 26550, . . . and this basis was increased to 2.2 cents per mile" in Ex Parte 148.

Interstate Traffic Disadvantaged—To the majority's requirement "of a specific finding on the issue of whether the present 1.65 cent intrastate rate produces now the proper intrastate proportion of revenue," said Justice Reed, "there seems to us a conclusive answer. The interstate maximum was adopted by the commission on the assumption that the intrastate rates would be adjusted to the same level. Therefore revenue from intrastate rates at the interstate fares is required to produce the needed income. . . . We think it is adequately shown that the orders in the general investigations were predicated upon the assumption that intrastate passenger traffic would have an equal basis with interstate traffic for fares."

Finally, if it should be contended that the intrastate fares here prescribed by the commission are unjust or unreasonable, said the dissent, the remedy is by application to the commission for reopening of its general investigation, rather than the pro-

cedure here followed.

#### **Editors See Corrosion Tests**

On June 5-6, 18 engineers and editors of technical publications were shown corrosion tests at the Corrosion Testing Station, Kure Beach, N. C. The visitors were guests of the International Nickel Company, Inc., the Dow Chemical Company, the Ethyl-Dow Chemical Company, and the Carnegie-Illinois Steel Corporation, joint sponsors of this testing station, at which products of more than 200 companies have been exposed to atmospheric or sea-water corrosion.

At this point, on the shore of the Atlantic Ocean, tests of various metals, alloys and



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played an important role, producing locomotives capable of hauling freights at passenger train speeds.

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coatings have been conducted for periods varying from 5 to 10 years. These tests include samples exposed to sea air and samples completely submerged in sea water, traveling at low and high velocities. the present time, approximately 15,000 specimens are being exposed to atmospheric corrosion, while about 2,000 specimens comprise the submerged tests. In the past 10 years, a total of about 4,000 specimens have been given submersion tests. In addition, during the past two years, various specimens of treated wood have been submerged in sea water to determine the resistance of different types of treatment to marine borers. A total of about 5,000 specimens of treated wood have been tested to date.

#### Union's Agreements Don't Bind Members

(Continued from page 1072)

parties to the suit were at odds as to this, and the majority held that further proceedings are required in the district court to determine whether they did authorize the brotherhood "in any legally sufficient manner" to represent them individually in the adjustment board proceedings growing out of the 1939 complaint. Their assent to final settlement or exclusive representation, it pointed out, might have been given in the following ways: by complaints through local union officials; by authorizing the brotherhood to submit the 1936 complaint; by virtue of brotherhood regulations; or by virtue of the collective agreement. A "factual evaluation" of the circumstances in the lower court is required. Moreover, it remains to be determined, the majority held, whether the brotherhood's authority to submit the issue to the board in 1936 was terminated by the withdrawal of the claim in 1938, even if it should be held that that authority had included a surrender of individual rights to concur in any agreement of settlement.

The dissenting opinion, on the other hand. took the position that the railroad and the brotherhood had reached an "amicable adjustment" by pursuing a course directed by the Railway Labor Act." "We are now asked," said Justice Frankfurter, "to nullify this settlement, arrived at after prolonged negotiations, and to open the door of litigation to new discords. Not only is it sought to revive the dispute and to restore it to the status it had before the adjustment board more than eight years ago. The respondent (employees) claim that after all these years they have a right to repudiate their bargaining agents and to try the authority of these agents as though this were a conventional lawsuit involving the responsibility of a principal for the conduct of his agent."

A Vigorous Dissent-The employees, he continued, "cannot deny that the brotherhood officials had authority to seek compliance by the railroad with the starting time agreement through the adjustment board. In view of the sweeping power of the (brotherhood's) general grievance committee to settle grievances, the settlement that was made on behalf of the brotherhood is invulnerable."

"This is not a simple little case about an agent's authority," Justice Frankfurter

went on to say. "The carrier is under a legal duty to treat with the union's representative for the purposes of the Railway Labor Act." If it refuses or challenges their authority, "it does so under pain of penalty. If it deals with them on the reasonable belief that the grievance officials of the brotherhood are acting in accordance with customary union procedure, settlements thus made ought not to be at the hazard of being jettisoned by future litigation.'

The assertion of the employees that there is no relation between their claim for money resulting from violation of a collective agreement (the 1939 claim) and a claim for the enforcement of the agreement (the 1936 claim), the dissenting justice remarked, is surely to "sever that which is organic. It wholly disregards the nature of such a collective agreement, its implications and its ramifications. In passing on the claim for money damages arising out of the yard agreement, any tribunal would have to examine, interpret and apply the collective agreement precisely as it would if the issue were the duty to observe the agreement in the future. . . . To find here merely an isolated, narrow question of law as to past liability is to disregard the ties which bind the money controversy to its railroad environment."

Union's Position Is Weakened-Justice Frankfurter emphasized also the "inimical" aspects of the majority opinion to the brotherhood's internal government. "The Railway Labor Act," he said, "as a product of long experience, is a complicated but carefully devised scheme for adjusting the relations between the two powerful groups constituting the railroad industry. It misconceives the legislation and mutilates its provisions to read into it common law notions for the settlement of private rights. If, when a dispute arises over the meaning of a collective agreement, the legally designated railroad bargaining unit cannot negotiate with the carrier without first obtaining the specific authorization of every individual member of the union who may be financially involved in the dispute, it not only weakens the union by encouraging divisive elements. It gravely handicaps the union in its power to bargain responsibly. . . . It reintroduces the destructive individualism in the relations between the railroads and their workers which it was the very purpose of the Railway Labor Act to eliminate.

"To allow every individual worker to base individual claims on his private notions of the scope and meaning of a collective agreement intended to lay down uniform standards for all those covered by the collective agreement, is to permit juries and courts to make varying findings and give varying constructions to an agreement. . . . Thus will be introduced those dislocating differentiations for workers in the same craft which have always been among the most fertile provocations to friction, strife, and strike in the railroad world. The Railway Labor Act, one had supposed, would be construed so as to reduce and not to multiply these seeds of strife."

Not a Reviewable Case-Finally, the dissenting opinion turned to the question

whether the adjustment board's disposition of the 1939 claim was open to judicial review, since it was a claim for money. The act provides, it said, that the board's awards shall be final except insofar as they contain a money award. Here the board's determination did not contain a money award, the dissent observed, because it did not direct the payment of money, but denied payment. This construction of the statute was compared to that part of the Interstate Commerce Act dealing with reparation orders, on which, Justice Frankfurter pointed out, the provisions for enforcement of adjustment board awards were based. If a carrier fails to comply with a reparation order, the injured party may sue, he said, but denial of a money claim by the commission bars the door to redress in the courts. It follows, then, that the board's award is not subject to judicial review, in his opinion, and he would reverse the court of appeals.

#### **April Accident Statistics**

The Interstate Commerce Commission on June 12 made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for April and the first four months of 1945, compared with the same 1944 periods. The compilation, which is subject to revision, follows:

	Mont		months ended with April	
Item	1945	1944	1945	1944
Number of train accidents* Number of casualties in train, train-serv-	1,400	1,287	6,103	5,503
ice and nontrain				
Trespassers: Killed Injured	114 88	120 90		
Passengers on trains (a) In train accidents*	:			
Killed Injured (b) In train-serv-	40	132	567	460
ice accidents Killed Injured	197	257	20 801	18 892
Travelers not on trains:		2		
Killed Injured Employees on duty:	92	106		379
Killed Injured All other noutres-	71 3,673	3,479	322 15,816	360 14,962
passers:**  Killed  Injured  Total—All classes		169 441	709 2,516	756 2,470
of persons: Killed Injured	339 4,579	363 4,505	1.502 20,461	1,536 19,490

\*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than \$150 to railway property.

\*Casualties to "Other nontrespassers" happen chiefly at highway grade crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons: 153 656 681 257 1,491 1,530 Killed Injured

#### Strike Vote on the Erie

With three separate disputes involved, a strike vote currently is being taken by members of the Brotherhood of Railroad Trainmen employed on the Erie. George C. Frank, assistant to president of the railroad, on June 7 characterized this move as an "effort to enforce uneconomical operating practices and payment of unreasonable



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claims," and pointed out that any interruption in service at this time would hamper the movement of war supplies and mili-

tary personnel.

Among the issues involved, Mr. Frank explained, "are practices which seriously aggravate the already critical man-power situation by requiring additional men to do work customarily handled by present men as part of their regularly assigned duties." The vote is being taken, he said, "in spite of the fact that the Railway Labor Act provides adequate machinery for handling differences of opinion without resorting to a strike vote."

The disputes which have brought the strike vote are described as follows:

(1) That passenger trainmen handling commuter trains in the Jersey City (N. J.) territory be awarded a full day's pay, in addition to their regular pay, for moving trains from the yards to the stations, and from stations back to the yards, an operation which requires from 5 to 15 min. and has always been a part of their regular assignment. The Brotherhood alleges this train movement constitutes exclusive yard work and trainmen should receive an extra day's pay, even though many of these crews now receive eight hours pay for about five hours work. Two claims decided by the Adjustment Board were paid by the Erie in accordance with the awards made.

(2) The Brotherhood of Railroad Trainmen demands that an agreement negotiated and signed jointly by the Erie and the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen & Enginemen and the Brotherhood of Railroad Trainmen on November 10, 1943, be terminated. This covers a controversy regarding road crews of trains in terminal The Erie maintains that it cannot terminate this agreement at the request of only one of the three brotherhoods, parties to the agreement; further, that no substitute agreement was proposed by the Trainmen which is a requirement of the Railway Labor Act specifying that an agreement must remain in effect until superseded by another negotiated agreement.

(3) The Brotherhood of Railroad Trainmen is demanding that a yard man must accompany a main track hostler and his helper to handle switches when engines are being moved by the hostler crew from the roundhouse to the station or yards. In many cases this would involve the assignment of a man to accompany the road hostler crew for the purpose of throwing a single switch at an expense of \$8.54 rep-

resenting a full day's pay.

A dispute has already been passed upon with the National Railroad Adjustment Board, Division 1, Chicago, and under its decision trainmen and yardmen are both permitted to handle switches. The Erie permitted to handle switches. has requested but as yet has not received an interpretation from Division 1 to determine if its decision forbids hostler helpers to handle switches. Mr. Frank explained that there is no rule that gives this work to yardmen, as hostler helpers have always handled their own switches, and the Brotherhood of Locomotive Firemen & Enginemen, who represent hostler helpers, maintain it has always been hostler helpers' work.

#### Approves Santa Fe's Entering Long Beach

(Continued from page 1071)

will be issued, providing that the work be commenced before January 1, 1946, and completed during that year.

Findings of Fact-To support this conclusion, the commission made 9 firdings of fact, viz: (1) The harbors of Los Angeles and Long Beach, though separately administered, constitute one large continuous harbor and terminal area; (2) the Los Angeles part of this area is served by the four carriers that serve Los Angeles; (3) the Long Beach part is served by the other carriers, but not by the Santa Fe, although its tracks are within 2 miles, so that its Long Beach traffic must be interchanged with the other roads; (4) delays and congestion of traffic would be eliminated by a short extension enabling the Santa Fe to serve Long Beach directly; (5) the ability of the 3 other roads to serve the public generally, as well as Long Beach, will not be impaired by the extension; (6) the Santa Fe can meet the cost of construction, \$537,330, out of treasury funds with no increase in debt, a sum that is not large in comparison with its recent expenditures of \$200 million to render it more able to meet wartime demands; (7) Long Beach, a city of 250,000, needs the service of all lines in the area to assure its continued welfare; (8) the Santa Fe's access to Long Beach would add to the city's industrial prospects through the work of the carrier's promotional and solicitation forces; and (9) the continued growth of Long Beach should benefit all the carriers by increasing the business of each.

Commissioner Miller's dissent applied to the construction proposed by the Santa Fe, and not to its entry into Long Beach, which he thought should be secured by construction of a connection to the Pacific Electric's line and performance by that carrier of switching service for the Santa Fe on the same terms as it now performs such service for the Southern Pacific and Union

Pacific.

#### Construction

ELGIN, JOLIET & EASTERN.—This road has awarded a contract to the Herlihy Mid-Continent Company for construction of a new yard and yard office at East Chicago, Ind. The yard will consist of 6.8 miles of track with approximately 40 turnouts, and the yard office will be a one-story brick structure, measuring 40 by 60 ft., with rooms for the agent, train crews and car inspectors.

HAMPTON & BRANCHVILLE.—This road has applied to the Interstate Commerce Commission for authority to construct an extension from Hampton, S. C., to connect with the Southern at a point near Lena, and by a spur therefrom to connect with the Seaboard Air Line at Luray, the entire project being about 13 miles.

#### **Supply Trade**

Joseph M. Gambill, for the past 15 years railroad lubricating engineer for the Continental Oil Company, retired June 1.

Edward M. Welty, assistant general manager of sales, has been appointed general manager of sales of the industrial fasteners division of the Oliver Iron & Steel Corp. to succeed James G. Graham,

W. Spraragen, executive secretary, has been appointed to the newly-created position of director of the Welding Research Council of the Engineering Foundation, Mr. Spraragen has served as executive secretary of the Welding Research Council since its organization in 1935. He was appointed research assistant to the welding research committee of the National Council of Defense and the Emergency Fleet Corporation in 1918. He was secretary of the division of engineering, National Research Council from 1920 to 1934 and secretary of the American Bureau of Welding from 1921 to 1936. He served as technical secretary of the American Welding Society from 1927 to 1942 and is editor and business manager



W. Spraragen

of the Welding Journal, official publication of the society. He was editor of the first two editions of the Welding Handbook published by the American Welding Society and is the author or co-author of many critical reviews of literature on practically all phases of welding.

Nelson C. Dezendorf, whose appointment as sales director of the Electro-Motive Division of the General Motors Corp., with headquarters at La Grange, Ill., was reported in the Railway Age of June 9, was born at Portland, Ore., on April 23, 1898, and received his higher education at the University of Oregon and the University of California. He served in the armed forces during World War I and in 1920 he entered the employ of the European Pacific Steamship Co., where he was engaged in making surveys of West Coast and European port activities. In 1922 Mr. Dezendorf went with the General Motors Acceptance Corp., at Portland, and five years later he was promoted to manager of the Seattle, Wash., office of that

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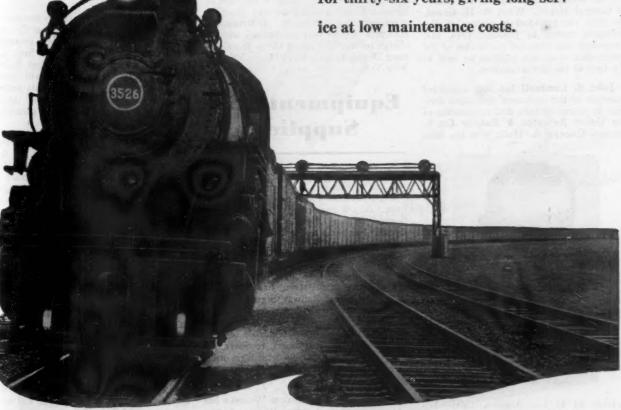
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• Today's tremendous traffic movements require motive power of highest efficiency at all times. To develop that efficiency each ton of fuel must yield every possible pound of steam. That's why it is vitally important always to maintain a complete arch in the locomotive firebox.

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AMERICAN ARCH CO. INC. 60 East 42nd Street, New York 17, N. Y. Locomotive Combustion Specialists organization. Some time later he was sent to New York and attached to the business development department, becoming manager of that activity in 1929. In 1931 he was elected a vice-president of G. M. A. C., and in the following year he was given a



Nelson C. Dezendorf

special assignment with the sales section of General Motors, with headquarters at Detroit, Mich. On January 1, 1941, Mr. Dezendorf became a director and a member of the executive committee of G. M. A. C., but relinquished these positions in the same year to be appointed general assistant to the vice-president in charge of distribution of General Motors. When R. H. Grant, the then vice-president in charge of distribution, retired in January, 1944, Mr. Dezendorf was advanced to director of the distribution staff, the position he held at the time of his new promotion.

John S. Lundvall has been appointed manager of the equipment specialties division in charge of sales and engineering of the Union Asbestos & Rubber Co. to succeed George A. Hull, who has been



John S. Lundvall

transferred to Los Angeles, Calif. Mr. Lundvall joined the company in 1925 as a mechanical engineer.

The Crane Company has announced the following changes in its sales and branch house division: Carter T. Pollock, formerly manager of Crane's Chicago branch, has been appointed manager of the central district with headquarters in Chicago; and

W. A. Burbine, manager of the Cleveland, Ohio, branch, has been appointed manager of the Chicago branch. A. N. Rosborough, manager of the Toledo, Ohio, branch succeeds Mr. Burbine at Cleveland; W. D. LaRue, manager of the Muncie, Ind., branch succeeds Mr. Rosborough at Toledo; and R. C. Danielson, manager of the plumbing department at the Indianapolis branch, succeeds Mr. LaRue at Muncie.

James R. Allen has been elected vicepresident in charge of coordinating engineering and production for the Union Aircraft Products Corporation, New York. For the past three years, Mr. Allen has filled administrative and engineering posts at Simmonds Accessories.

E. G. Hallquist, special representative in the Chicago district sales office of the General Steel Castings Corporation, has been transferred to the company's Granite City, Ill., plant as assistant to the vice-president.

The Maxim Silencer Company of Hartford, Conn., has been awarded a fourth star to add to its Army-Navy "E" for continued excellence in production.

The War and Navy Departments jointly have issued a pamphlet entitled the Army-Navy Contractors Guide for Prime and Subcontractors. The pamphlet is an outline for contractors which suggests methods of advance planning and illustrates practical procedures for settlement of terminated contracts. Copies may be obtained without charge by written request to the Readjustment Distribution Center, 90 Church Street, New York.

## Equipment and Supplies

#### SIGNALING

The Northern Pacific has ordered an 8-lever Saxby & Farmer interlocker from the General Railway Signal Co., to control 5 signals, 3 switches and 2 facing point locks at a junction at Peak, N. D. This order includes relays, dwarf signals and electric lever locks.

The CANADIAN PACIFIC has contracted with the General Railway Signal Co., for materials to install absolute permissive block signaling on 22 miles from Crowsnest, B. C., to Burmis, Alta. Materials ordered include signals, transformers, rectifiers, relays, double-arm upper-quadrant train order signals, rotary circuit controllers and switch indicators.

The Denver & Rio Grande Western has ordered from the General Railway Signal Co., equipment for adding the control of an end of double track and a crossover near Midvale, Utah, to the C. T. C. control machine at Salt Lake City, Utah. The order includes a 10-in. control machine panel with 2 switch levers, 3 signal levers, and 6 track indication lights; 6 additional track indication lights for existing panels;



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the additional switch machines; switchoperated time relays; rectifiers; signals; switch locks, and an 8 by 10-ft, steel instrument house.

. . .

The Delaware & Hudson has contracted with the General Railway Signal Co., for materials to revise and extend the Lanesboro to Center Village, N. Y., C. T. C. territory to Grover. A new control machine, to be installed at Nineveh, N. Y., will have a 76-in. panel equipped with 29 track indication lights. Twenty-seven levers will control 19 switch machines and 31 signals. The order includes relays, dual-control electric switch machines, switch locks and signals.

The Kansas City Southern has ordered from the General Railway Signal Co., materials to provide interlocking protection for a crossing of the Sheffield Steel Co., and the Kansas City Southern at Kansas City, Mo. Two dwarf levers will control 4 signals and 2 derails. Materials ordered also include high signals, dwarf signals, relays, rectifiers, switch circuit controllers and a wired relay case.

The Pere Marquette has ordered from the General Railway Signal Co., a floor mounting control machine with an 18-in. by 42-in. panel equipped with 10 track indication lights and 13 route indication lights. Twenty-four levers will control 15 switch machines, 13 signals and 4 highway crossings, at the Fifth street, Saginaw, Mich, interlocking. The order includes relays, plug-in switch machine controllers and relay racks.

#### **Abandonments**

Pere Marquette.—In a proposed report Examiner Ralph R. Molster has recommended that the Interstate Commerce Commission deny this company's application for authority to abandon a branch from Williamsburg, Mich., to Elk Rapids, 9.01 miles, on the ground that, while its operation has not thus far resulted in serious loss, food production in the area served would be impeded by the abandonment "because of infirmities of highway transportation caused by war conditions." In the examiner's opinion, operation should be continued for at least a year after the termination of the war in the Pacific. The report noted the

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of these 2-10-4 type locomotives on the Bessemer & Lake Erie Railroad are equipped with Elesco exhaust steam injectors for dependable boiler feeding and maximum boiler capacity.

- Automatically operates on either exhaust steam or live steam.
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conclusion of an engineer of the state public service commission to the effect that "the territory has business sufficient to support the railroad and that the principal reason for unprofitable operation thereof is the use of private trucks."

#### Financial

#### N. J. Rules Against Railroads

On the basis of hearings before him while he was a circuit court judge, A. Dayton Oliphant, New Jersey state supreme court justice, has ruled that payments made by five railroads on delinquent taxes for years 1932 through 1940 must be applied first to interest and then to principal and that interest must be computed at 12 per cent per year. The decision resulted from circuit court suits by the state to collect \$12,009,790 in tax interest alleged due from the Erie, the Lehigh Valley, the New York Central, the Delaware, Lackawanna & Western and the Reading. The state intends to issue similar suits against the Central of New Jersey and the New York, Susquehanna & Western.

ALTON.-Promissory Notes .- Division 4 of the Interstate Commerce Commission has authorized this road to issue \$1,946,677 of promissory notes in evidence, but not in payment, of the unpaid portion of the cost of 600 50-ton box cars and 150 50-ton twin hopper cars being built by the American Car & Foundry Company at a total cost of \$2,433,354. The notes have been financed with the First National Bank of Chicago at a 1.9 per cent annual interest rate.

BALTIMORE & OHIO .- To File Adjustment Plan.-The B. & O. has received sufficient acceptances from the bondholders effected to file with the United States district court its debt adjustment plan which is designed to improve the road's financial structure and prepare for the post-war period.

CHICAGO, MILWAUKEE, ST. PAUL & PA-CIFIC.-Promissory Notes .- This road has asked the Interstate Commerce Commission for authority to issue \$5,331,400 of promissory notes in connection with the purchase of the following equipment under conditional sale arrangements: 5 5,400-hp. dieselelectric freight locomotives to be built by the Electro-Motive Division of General Motors Corporation at \$506,134 each; 5 4,000-hp. diesel-electric passenger locomotives to be built by Electro-Motive at \$358,705 each; 10 1,000-hp. diesel-electric switching locomotives to be built by Fairbanks, Morse & Company at \$79,043 each; 4 1,000-hp. diesel-electric switchers to be built by the Baldwin Locomotive Works at \$79,379 each; 6 1,000-hp. diesel-electric switchers to be built by the American Locomotive Company at \$79,399 each; 25 cabooses to be built in company shops at \$4,000 each; and 500 50-ton flat cars to be built in company shops at \$2,200 each.

DELAWARE & HUDSON .- Approves Albany & Susquehanna Merger.-On June 7 stockholders approved merger of the Albany & Susquehanna, a leased line, into the Delaware & Hudson Railroad, wholly

owned subsidiary of the Delaware & Hudson Company. A. & S. stockholders had approved the merger on May 2. At the meeting, J. H. Nuelle, president, said the merger is expected to be completed on July 2 and is a step in a program to refund the entire funded debt of the Delaware & Hudson system. He said invitations for bids on the new bonds may be sent out before July 1 for return by the middle of July and that calls for redemption of old bonds may be made by August 1. Upon completion of the merger, outstanding funded debt of the D. & H. system will be about \$48,-829,900.

DENVER & RIO GRANDE WESTERN .- Rio Grande Motor Way Stock.—This road's wholly-owned highway subsidiary, Rio Grande Motor Way, has applied to the Interstate Commerce Commission for authority to issue an additional 8,073 shares of common stock of \$100 par value, to increase its capitalization in order to "adequately finance operations." This stock would go to the parent company, in addition to the 4,927 shares which it now holds.

McCLOUD RIVER .- Exchange of Stock .-Division 4 of the Interstate Commerce Commission has authorized this company to issue 12,000 shares of common stock without par value to be exchanged for an equal number of shares of \$100 par value now outstanding.

MISSOURI-ILLINOIS.—Acquisition. — The Interstate Commerce Commission, Division 4, has authorized this company to acquire the property of the Missouri River & Bonne Terre, in consideration of cancellation by it of advances in the amount of \$253,243. The Bonne Terre has been operated under lease by the M-I which owns its capital stock. The Missouri Pacific controls the M-I through ownership of 51 per cent of its stock.

NEW YORK, CHICAGO & St. Louis .-Equipment Trust Certificates .- Division 4 of the Interstate Commerce Commission has authorized this company to assume liability for \$1,400,000 of 11/2 per cent serial equipment trust certificates in connection with the purchase of 5 baggage cars and 500 50-ton box cars (previous item in Railway Age of May 26, page 962). The certificates were sold to the National City Bank of Cleveland at 99.454. In its report the division noted that this company has reduced its non-equipment debt by 33 per cent in the past seven years.

NORTHERN PACIFIC.—Equipment Trust Certificates.—Division 4 of the Interstate Commerce Commission has authorized this company to assume liability for \$3,500,000 of 11/2 per cent serial equipment trust certificates in connection with the purchase of equipment to cost \$4,436,855, including: 8 1,000-hp. diesel-electric switching locomotives at \$78,825 each, from the Baldwin Locomotive Works; 4 1,000-hp. dieselelectric road-switching locomotives at \$87,325 each, from the American Locomotive Company; and 1,000 50-ton box cars, 500 from the Pullman-Standard Car Manufacturing Company and 500 from the American Car & Foundry Company. The certificates were sold to the Central Hanover Bank & Trust Company at 99.43. Since April 24, 1943, the division noted in its report, this road has paid in cash \$15.-634,489 for new equipment or improvements to old equipment; has purchased \$26,416,500 face value of long-term mortgage debt; and has expended \$14,824,435 for additions to

TEXAS & PACIFIC. -Bonds .- This road has applied to the Interstate Commerce Commission for authority to issue \$39,000,-000 of general and refunding mortgage bonds, series E, to be dated July 1 to mature July 1, 1985. The bonds would be sold on the basis of competitive bids with the interest rate named by the successful bidder; and the proceeds would be used, along with funds from the applicant's treasury, to retire general and refunding mortgage bonds of other series outstanding in the amount of \$40,956,000.

#### Average Prices Stocks and Bonds

Average price of 20 representative railway stocks

Average price of 20 representative railway bonds

Last week

56.13 55.88

99.48 99.09 56.13 55.88 40.58 99.48 99.09 88.50

#### Dividends Declared

Chicago & North Western.—5% preferred A, \$2.50, payable July 25 to holders of record June 30.

June 30.
Elmira & Williamsport.—7% preferred, \$1.60.
semi-annually, payable July 2 to holders of record

June 20.

Norwich & Worcester.—8% preferred, \$2.00, Norwich & Worcester.—8% preferred puarterly, payable July 2 to holders of record June 15. (Payment subject to receipt of funds from N. Y., N. H. & H. RR.).

Tennessee, Alabama & Georgia.—25¢, payable June 30 to holders of record June 15.

#### Railway Officers

#### EXECUTIVE

H. J. Beem, general manager of the Nevada Northern, has been elected vicepresident, with headquarters as before at East Ely, Nev.

T. C. Davis, chairman of the executive committee of the Missouri Pacific Railway Company at New York, has been elected chairman of the board of directors, succeeding J. S. Pyeatt, who has refused re-election because of ill health. Mr. Pyeatt is president of the Denver & Rio Grande Western, with headquarters at Denver, Colo. Mr. Davis will continue as chairman of the executive committee of the Missouri

Albert H. Seaver, whose appointment as special assistant to the vice-president of the New York, New Haven & Hartford at Boston, Mass., was announced in the Railway Age of May 19, was born at Boston on June 19, 1876, and entered railroading as an office boy of the New York & New England (now the New York, New Haven & Hartford) in July, 1895, serving subsequently as rate clerk and excursion clerk. After that road's consolidation with the New Haven, he was employed as clerk and as chief rate clerk at Boston until February, 1904, when he became chief clerk, passenger department, marine district, at New York; and in May, 1910, he was named assistant general passenger agent at New York, covering the railroad and

1082

Railway Age-June 16, 1945

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steamship departments. From March, 1913, to August, 1918, Mr. Seaver served as general passenger agent of the New England Steamship Co. and assistant general passenger agent of the New Haven at New York, becoming general passenger agent of the steamship company alone in the

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Albert H. Seaver

latter year. On October 21, 1927, he was appointed assistant passenger traffic manager of the New York, New Haven & Hartford at Boston, and in May, 1934, he was promoted to passenger traffic manager there, the position he held at the time of his recent appointment as special assistant to the vice-president.

# FINANCIAL, LEGAL AND ACCOUNTING

Charles H. Schutte, whose promotion to general claim agent of the Missouri-Kansas-Texas, with headquarters at Dallas, Tex., was reported in the Railway Age, was born at Galveston, Tex., on December 24, 1889. He entered railway service on January 1, 1904, as an office boy of the Gulf, Colorado & Santa Fe (part of the Santa Fe System), later serving as a clerk of the general claim department at Galves-



Charles H. Schutte

ton. Mr. Schutte studied law while employed by the G. C. & S. F., and in 1910 he was promoted to claim adjuster, with head-quarters at Temple, Tex., being transferred to Cleburne, Tex., one year later. On December 6, 1912, Mr. Schutte went with the M-K-T as chief clerk of the general

claim agent, with headquarters at Dallas, and in 1914 he was advanced to assistant general claim agent, holding that position until his new appointment.

Stanley Henry May, assistant general auditor of the Canadian National, has been appointed general auditor at Montreal, Que., where he succeeds John Faickney Aitchison, who has retired after 48 years of service.

James A. V. Hill, auditor of express accounts of the Canadian National at Montreal, Que., has retired after 50 years of service, and George L. Bishop, chief clerk to auditor of express accounts, has been named to succeed him.

Gordon Stewart Reid, whose appointment as auditor of passenger accounts of the Canadian National at Montreal, Que., was announced in the Railway Age of May 26, was born at Tralee, Ireland, on October 9, 1882. He entered railroading with the Grand Trunk (now part of the Canadian National) at Montreal on September 16, 1907, as a clerk in the auditor of passenger accounts office, and on May 1, 1917, he was



Gordon Stewart Reid

named assistant chief clerk, auditor of revenues office. He became traveling auditor in March, 1921, and in June, 1923, he was appointed chief clerk, auditor of passenger accounts office, of the Canadian National. Mr. Reid was promoted to passenger revenue accountant in the auditor of passenger accounts office on October 1, 1939, and remained in that post until his recent appointment as auditor of passenger accounts.

L. M. Abbot, whose promotion to general solicitor of the Southern at Washington, D. C., was announced in the Railway Age of May 26, was born at Lynchburg, Va., on July 30, 1900, and attended the University of Virginia, receiving a degree in law in 1924. He entered railroading with the Southern as law assistant at Washington on September 1, 1924, and on May 15, 1928, he was advanced to solicitor. Mr. Abbot was named assistant general solicitor on June 1, 1937, and remained in that post until his recent promotion to general solicitor.

Norman J. MacMillan, whose appointment as general counsel with jurisdiction over the law department of the Canadian National at Montreal, Que., was announced

in the Railway Age of June 9, was born at Bracebridge, Ont., on April 8, 1909, and graduated from the University of Manitoba, receiving his B. A. degree in 1930 and his LL.B. degree in 1934. He entered railroad service with the Canadian National



Norman J. MacMillan

in 1937 as solicitor in the law department at Winnipeg, Man., and six years later he was appointed assistant general solicitor at Montreal, remaining in that post until his recent appointment as general counsel with the same headquarters.

Archibald Symington Mitchell, whose retirement as auditor of passenger accounts of the Canadian National at Montreal, Que., was announced in the Railway Age of May 26, was born at Newmilns, Scotland, on January 17, 1885, and entered railroading with the London, Midland & Scottish. He joined the now Canadian National at Montreal in May, 1906, as a clerk in the office of the auditor of passenger accounts, and on September 1, 1912, he was named chief clerk. He became assistant auditor of the Canadian National on March 1, 1923, and chief accountant in September, 1932. On October 1, 1939, he was appointed auditor of passenger accounts, the position he held at the time of his recent retirement.

### **OPERATING**

C. E. Astler has been appointed general agent of the Union Pacific, with headquarters at Cheyenne, Wyo.

Marian Atterberry, superintendent of transportation of the Missouri & Arkansas, with headquarters at Harrison, Ark., has resigned to enter business for himself.

A. C. Morrissey, chief train dispatcher of the Milwaukee division of the Chicago, Milwaukee, St. Paul & Pacific, has been promoted to trainmaster of that division, with headquarters as before at Beloit, Wis.

### TRAFFIC

Charles Walter Wells, general freight agent of the Canadian National at Toronto, Ont., has been appointed freight traffic manager of the Central region at Toronto succeeding Frederick Patrick Nelson, who has retired. James Anderson Argo, general freight agent, rates, divisions, and tariffs, at Montreal, Que., has been transferred to Toronto succeeding Mr. Wells. Frederick G. Gould, assistant general

# Right for both jobs because it's built for both jobs

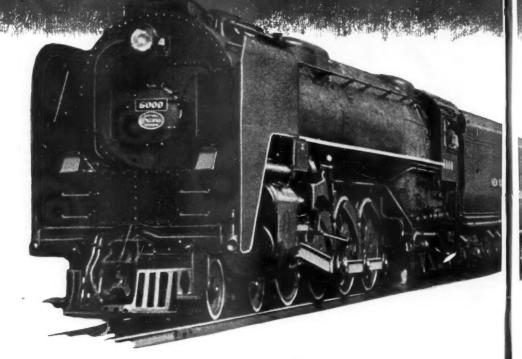
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THE trains you see on these two pages are being pulled by the New York Central's new dual-purpose locomotive, the "Niagara."

Built by the American Locomotive Company, in close co-operation with the New York Central, it is designed to pull the System's crack passenger liners and also

meet the demands for high speeds in hauling freight.

Locomotives that possess the interchangeability of the "Niagara" promise many benefits. They can help reduce the expense many railroads have had to bear in buying, operating and maintaining powerful locomotives for heavy freight hauls and faster, less nowerful locomotives for lighter passenger runs.





They can provide a new kind of operating efficiency by building up extra power needed for tough jobs, and conserving power on the easier tasks.

And, perhaps most important of all, they can open new roads to undreamed-of economies - savings that will be shared by thousands.

American
Locomotive

THE MARK OF MODERN LOCOMOTION

freight agent at Toronto, has retired, and Alexander Childs O'Neil, division freight agent at Hamilton, Ont., has been named to replace him. C. R. Murray, assistant general freight agent, rates, at Montreal, has been promoted to general freight agent there and C. L. McCoy, chief clerk, has been advanced to assistant general freight agent at Montreal.

Mr. Wells, who was born at Brighton, England, entered railroading in May, 1905, as a junior clerk in the freight traffic de-



Charles Walter Wells

partment of the Canadian National at Montreal. After serving as chief clerk to the general freight agent and assistant manager of the tariff bureau successively, Mr. Wells was appointed assistant general freight agent in charge of rates and tariffs at Montreal on April 1, 1930, and he remained in that post until April, 1939, when he was promoted to general freight agent there. He transferred to Toronto in 1940, and remained in his post as general freight agent until his recent promotion to freight traffic manager with the same headquarters.

Mr. Nelson entered railroading with the Grand Trunk (now the Canadian National) as a messenger in the transportation department at Hamilton, in 1896, and after serving in various capacities he was named



C. R. Murray

soliciting freight agent in 1907. He was subsequently employed as traveling freight agent, city freight agent and district freight agent in the freight traffic department at Toronto, Hamilton, and North Bay, Ont., successively, until January, 1940, when he was named general freight agent at Toronto. Mr. Nelson was appointed assistant freight traffic manager there the following May, and in 1941 he was promoted to freight traffic manager with the same headquarters, the position he held at the time of his recent retirement.

Mr. Murray was born in Nova Scotia and entered railroading in June, 1907, as an operator with the Canadian Government Railways (now the Canadian National) there. After serving overseas in the first World War he returned to railroading in July, 1919. In 1921 Mr. Murray transferred to the freight traffic department, and after serving in various positions in that department he was appointed assistant general freight agent at Toronto. In 1940 he was transferred to Montreal to assume charge of rates for lines from Armstrong, Ont., and West Fort William eastwards, and he remained in that post until his recent promotion to general freight agent at Montreal.

Robert R. Welker, whose appointment as general passenger agent in charge of train service of the New York, New Haven & Hartford at Boston, Mass., was announced in the *Railway Age* of May 19, was born at Plainfield, Ohio. Mr. Welker, who is 37 years old, entered the service of the New Haven in November, 1930, as



Robert R. Welker

secretary to the general passenger agent at New Haven, Conn., and in 1935 went to Boston as assistant chief clerk of the passenger traffic department. Two years later Mr. Welker was named secretary to the passenger traffic manager at Boston, and in 1938 he became train service agent, the position he held at the time of his recent appointment as general passenger agent at Boston.

### MECHANICAL

A. G. Kann, general master mechanic of the Illinois Central at Waterloo, Iowa, has been promoted to general superintendent of equipment, with headquarters at Chicago, succeeding P. O. Christy, who has been granted a leave of absence due to illness. H. E. May, shop engineer at Chicago, has been advanced to superintendent of equipment, with the same headquarters, replacing J. N. Fox, who has been appointed master mechanic at Mem-

phis, Tenn., where he relieves R. W. Ellis, who in turn succeeds Mr. Kann as general master mechanic at Waterloo. J. A. Welsch, master mechanic at Paducah, Ky., has been advanced to shop superintendent, with the same headquarters, replacing R. R. Royal, who has retired because of ill health. C. T. Eaker, general foreman at Memphis, has been promoted to master mechanic, with headquarters at Paducah, succeeding Mr. Welsch. J. M. Jeffrey, assistant master mechanic at Markham, Ill., has been advanced to master mechanic, with headquarters at Centralia, Ill., relieving H. N. Seely, who has also retired because of sickness.

P. J. Danneberg, mechanical superintendent of the Northern district of the Atchison, Topeka & Santa Fe at La Junta, Colo., has been transferred to the Southern district, with headquarters at Amarillo, Tex., succeeding W. R. Harrison, who has been granted a leave of absence due to illness. D. J. Everett has been appointed acting master mechanic of the Western division, with headquarters at Dodge City, Kan., replacing W. W. Lyons who, in turn, has been appointed acting mechanical superintendent of the Northern district, relieving Mr. Danneberg.

### **OBITUARY**

J. L. Cantwell, master mechanic of the Southern at Bristol, Va., died there on June 4.

A. E. Blair, general agent of the Chicago, Rock Island & Pacific, with head-quarters at Cincinnati, Ohio, died suddenly in that city on June 5.

George J. Lincoln, who retired in 1941 as general agent of the Chicago, Milwaukee, St. Paul & Pacific at Philadelphia, Pa., died in a hospital in that city on June 12.

William J. O'Brien, who retired in 1943 as general manager of the Indiana Harbor Belt and the Chicago River & Indiana, with headquarters at Chicago, died in a hospital in that city on June 8.

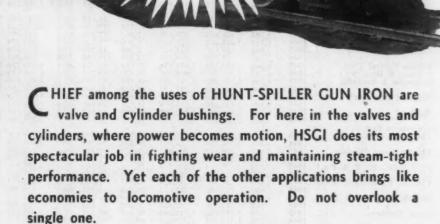
Dr. John McCombe, who retired two years ago as chief medical officer of the Canadian National after having served in that post since 1928, died at Dorval, Que., on June 11. He was a former chairman of the medical and surgical section of the Association of American Railroads.

Michael H. Murphy, general eastern passenger agent of the Delaware, Lackawanna & Western at New York, died recently. Mr. Murphy was born at Elmira, N. Y., and entered railroading in April, 1898, as ticket clerk and telegraph operator of the Lackawanna at Elmira, becoming ticket clerk there in 1905 and transferring to New York in 1910. In July, 1913, he was named city ticket agent at New York, and from September, 1918, to March, 1920, he served as ticket agent of the United States Railroad Administration, returning to the Lackawanna as traveling passenger agent in the latter year. In April, 1928, Mr. Murphy was named district passenger agent at New York, and eight years later he was promoted to general eastern passenger agent, the position he held at the time of his death.

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# Freight Operating Statistics of Large Steam Railways—Selected Locomotive-miles Car-miles Ton-miles (thousands) Road locos, on line

Items

New En Bosto N. Y. Great L Delaw Del., Erie Grand Lehig New New Pere Pitts. Waba Central Baltin Centra Chicag Elgin, Long Penns Readi Pocahon Chesa Norfo Southern Centra Gulf, Illinoi Yaz Louis Seabo South Northwe Chi. & Chicag Chi., Chi., Duluti Great Min., North Central Alton

Atch., G. (Chi., 1 Chi., 1 Denve: Souther Union Southwest Mo.-Ki Missouth St. Lo St. Lo St. Lo Texas

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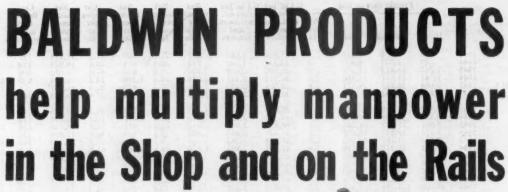
Railwa

		Locomotive-miles	Car-miles	Ton-miles (thousands)	Road loco	os. on line	
	Miles of road Train-	Principal and	Loaded Per (thou- cent	Gross Net- excl. locos. rev. and	Serviceable	Per cent	
Region, road, and year New England Region:	operated miles	helper Light		d & tenders non-rev.	Unstored Stored	B. O. B. O.	
Boston & Albany	302 171,142	2 208,168 39,723	6 4,548 59.1 3 4,285 60.7	310,473 125,392 291,044 121,482	74	18 19.6 13 13.8	
Boston & Maine	1,807 434,847	7 511,604 55,261	8 16,476 65.0 1 15,553 64.4 7 22,262 69.1	1,096,142 478,246 1,044,786 456,774	148 1 159	19 11.3 18 10.2	
N. Y., New H. & Hartf.† 1945 1944 Great Lakes Region:	1,815 564,895 1,815 570,847	5 741,724 52,567 7 713,562 65,226	7 22,262 69.1 6 20,860 66.5	1,362,219 606,915 1,320,939 583,423	259 6 248 1	28 16.3 26 15.5	
Delaware & Hudson1945 1944	846 377,443			1,141,064 602,575 1,170,420 617,851	148 35 146 20	37 16.8 48 22.4	
Del., Lack. & Western 1945 1944	971 399,335 971 401,197	5 487,274 89,512 7 472,783 79,776	2 18,306 69.7 6 17,424 69.9	1,204,164 569,569 1,137,424 541,692	153 8 150 14	40 19.9 31 15.9	
Erie	2,243 1,027,766 2,244 1,120,366	6 1,116,886 77,567 6 1,200,230 85,691	7 50,463 65.4 1 49,780 64.8	3,329,323 1,468,666 3,337,444 1,468,536	337 327	60 14.9 70 17.6	
Grand Trunk Western	1,026 297,774 1,026 286,200	4 307,391 3,040	0 10,654 71.2 5 9,606 63.0	661,793 305,480 643,973 278,123	63 1	17 21.0 14 18.4	
Lehigh Valley	1,247 597,621	1 657,313 102,980	9 21,809 63.2 0 24,542 60.3	1,544,737 743,053 1,761,055 820,244 10,175,702 4,738,398	150 154 1,139 10	19 11.2 13 7.8 237 17.1	
New York, Chi. & St. L1945	10,325 3,974,309 1,656 863,615	2 4,138,204 266,877 9 4,284,684 273,988 5 883,899 14,351	8 149,232 61.6	10,175,702 4,738,398 10,560,310 4,852,741 2,324,044 1,096,491	1,139 1,199 182 1	237 17.1 213 15.0 17 8.5	
Pere Marquette1945	1,657 893,627 1,915 481,514	7 904,295 11,350 4 497,481 11,932	0 34,875 65.5 2 16,956 66.0	2,306,847 1,047,542 1,156,960 551,060	170 146	17 9.1 21 12.6	
Pitts. & Lake Erie	1,945 481,147 229 97,622	7 499,685 14,213 2 99,796 271	3 15,569 65.0 1 4,289 62.6	1,064,898 503,511 364,633 209,256	144	20 12.2 16 36.4	
Wabash	2,381 782,198	5 109,301 80 8 801,467 19,143	0 4,328 60.6 3 30,217 71.5	385,126 223,224 1,952,503 923,966	35 175 172 7	11 23.9 37 17.5	
Central Eastern Region: Baltimore & Ohio	2,381 765,600 6,096 2,439,938			1,812,897 845,270 6,211,562 3,117,228	172 7 987 3	41 18.6 182 15.5	
Central of New Jersey† 1945	6,109 2,535,730 654 236,890	3.097.581 321.690	84,263 62.9	6,062,614 2,947,526 674,789 341,075	928 123 3	197 17.5 27 17.6	
Chicago & Eastern Ill 1945	655 264,151 912 252,459	1 311,000 72,329	7,390 65.5	708,844 347,461 504,767 240,775	140 2 68 2	14 9.0 10 12.5	
Elgin, Joliet & Eastern 1945	912 327,208 392 143,228	8 148,214 4,421	9,741 59.1 4,239 67.2	699,390 314,654 328,315 174,960	80 65	7 8.0 10 13.3	
Long Island	392 145,969 372 38,341 372 40,353	9 151,461 4,014 1 40,158 17,283	3,974 65.0 3 461 57.8	314,782 170,763 32,013 13,692	64 47 45	12 15.8 3 6.0 8 15.1	
Pennsylvania System 1945 1944	372 40,353 9,868 4,791,773 9,881 5,147,672	2 5.956.712 737.748	464 56.0 188,547 63.8 188,661 60.6	35,547 15,168 13,430,616 6,512,046 13,682,806 6,478,337	2,050 2,019	8 15.1 177 7.9 189 8.6	
Reading1945	1,365 643,502 1,411 622,203	2 721,258 84,478	3 22,042 67.9	1,643,719 905,172 1,571,261 839,701	283 8 288 1	41 12.3 41 12.4	
Pocahontas Region: Chesapeake & Ohio1945	3,035 1,166,139	1,264,910 58,447	54,059 57.2	4,610,329 2,598,663	471 5	69 12.7	
Norfolk & Western	3,032 1,183,451 2,132 872,400	1,288,050 61,034 953,775 76,735	51,973 56.5 40,546 60.1	4,511,039 2,578,258 3,426,534 1,855,085	432 305 5	75 14.8 11 3.4	
Southern Region: Atlantic Coast Line1945	2,132 847,765			3,288,738 1,790,951	305 9 374 4		
Central of Georgia†1945	4,926 1,227,143 4,953 1,150,533 1,783 406,632	3 1,178,530 17,754	31,308 60.2	2,346,541 1,030,577 2,139,538 899,779 677,889 321,471	374 4 364 7 91	28 6.9 30 7.5 16 15.0	
Gulf, Mobile & Ohio1945	1,783 368,617	376,456 5,900 375,917 2,060	8,735 68.7 11,176 81.1	579,674 271,680 673,576 340,176	95 109 3	11 10.4 8 6.7	
Illinois Central (incl. 1944	1,962 327,756 6,346 1,652,193	1,671,456 31,857	11,648 73.9	744,915 369,775 4,394,536 2,098,308	111 642 3	8 6.7 57 8.1	
Yazoo & Miss. Vy.) 1944 Louisville & Nashville 1945	6,347 1,851,619 4,746 1,604,281	1,868,301 34,629 1,741,786 46,948	69,217 62.2 42,048 65.7	4,908.971 2,289,628 2,980,910 1,543,104	665 421 3	39 5.5 62 12.8	
Seaboard Air Line* 1945 1944	4,736 1,646,552 4,163 1,045,460	2 1,787,192 48,608 1,113,307 19,682	30,968 68.3	3,039,111 1,557,322 1,996,968 867,293 2,008,611 867,643	422 1 297 322	44 9.4 36 10.8 25 7.2	
Southern	4,163 1,090,680 6,471 2,275,048 6,479 2,268,622	2,322,781 42,097	54,919 72.8	2,008,611 867,643 3,403,691 1,609,386 3,329,769 1,528,685	614	25 7.2 88 12.5 87 12.8	
Northwestern Region: Chi. & North Western1945	8,069 1,090,829	1,135,227 24,745	34,824 69.9	2,328,538 1,096,956	371 10	104 21.4	
Chicago Great Western1945	8,098 1,105,186 1,445 296,410	1,157,621 24,628 306,451 6,417	34,769 68.5 9,773 73.1	2,290,255 1,095,223 622,894 284,230	*384 23 72	101 19.9 10 12.2	
Chi., Milw., St. P. & Pac.† . 1945	1,445 311,498 10,714 1,525,851	317,454 11,021 1,620,797 75,726	9,468 69.3 55,160 71.3	631,398 285,702 3,595,897 1,750,488	72 499 41	9 11.1 72 11.8	
Chi., St. P., Minneap. & Om. 1945	10,732 1,635,793 1,606 224,661 1,606 239,380	1,751,980 81,783 242,879 13,981	52,519 67.1 5,982 72.6	3,559,524 1,698,209 402,444 192,055 418,891 192,864	541 27 99 14 90 26	68 10.7 20 15.0 12 9.4	
Duluth, Missabe & I. R 1945	1,606 239,380 546 34,134 545 32,335 8,276 1,212,550	257,072 14,745 34,431 1,260 32,437 683	734 54.0 558 56.2	418,891 192,864 56,025 29,571 39,999 20,227	90 26 58 2 41 7	12 9.4 6 9.1 18 27.3	
Great Northern	8,276 1,369,275	1,370,943 69,588	45,151 71.8 46,637 65.1	3,001,957 1,440,975 3,353,433 1,595,337	415 27 419 5	42 8.7 61 12.6	
Min., St. P. & S. St. M 1945 1944	4,259 420,460 4,259 559,553	429,188 9,843 576,212 11,401	11,180 68.9 14,383 61.3	728,509 342,906 1,062,770 509,475	127 136 3	13 9.1 10 6.8	
Northern Pacific	6,570 971,402 6,571 1,039,894	1,041,160 75,922	40,145 74.2	2,629,140 1,339,092 2,848,711 1,430,797	372 382 28 15	52 11.5 49 11.0	
Central Western Region: Alton†	915 301,398 915 280,149	323,192 673 297,351 825	8,963 72.4 7,382 66.6	569,545 314,259 497,618 232,196	73 76	5 6.4 3 3.8	
Atch., Top. & S. Fe incl. 1945 G. C. & S. F. & P. & S.F.) 1944	13,115 3,688,170 13,123 3,229,100	3,898,903 197,070	132,973 65.6	8,774,672 3,632,287 7,354,186 3,10°,743	889 838 8	114 11.3	
Chi., Burl. & Quincy1945	8,789 1,436,719 8,794 1,509,341	1,499,522 48,620 1,590,894 52,354	57,657 70.5 54,635 66.4	3.830.573 1.854.189	480 494	67 12.2 59 10.7	
Chi., Rock I. & Pac.† 1945 1944	7,716 1,477,440 7,718 1,490,111	1,539,568 18,784 1,568,389 18,503	48,073 72.3 44,369 67.6	3,740,243 1,760,524 3,007,735 1,383,671 2,847,080 1,235,562	395 393	64 13.9 63 13.8	
Denver & R. G. Wn.† 1945 1944 Southern Proific Pro Lines 1945	2,386 489,192 2,399 451,427	550,453 99,991 524,100 89,611	16,852 79.6 15,818 78.6	1,039,132 523,308 993,846 505,728	180 12 178 7	33 14.7 38 17.0	
Southern Pacific—Pac. Lines 1945 1944 Union Pacific	8,179 2,343,796 8,194 2,306,211 9,781 3,153,533	2,684,008 445,997 2,643,470 373,249 3,370,191 293,697	99,927 68.9 95,845 68.8 118,028 70.8	6,457,332 2,777,430 6,182,505 2,617,927 7,636,818 3,536,489	789 2 834 2 807 30	151 16.0 86 9.3 75 8.2	
Southwestern Region:	9,781 3,153,533 9,782 3,170,887	3,370,191 293,697 3,408,111 301,426	118,028 70.8 113,674 71.6	7,636,818 3,536,489 7,361.123 3,493,331	819	68 7.7	
MoKansTexas Lines 1945	3,241 844,421 3,241 805,721	872,480 15,501 832,043 13,722	23,787 64.0 21,316 62.6	1,604,614 732,052 1,453.658 653,269	158 150	11 6.5 18 10.7	
Missouri Pacific† 1945	7,056 1,715,967 7,071 1,875,929	1,795,896 45,907 1,972,575 45,815	64,766 69.3 66,079 64.4	4,232,816 1,976,649 4,561,474 2,067,446	452 1 480 1	69 13.2 57 10.6	
Texas & Pacific	1,882 462,811 1,882 491,489	462,811 6,409 491,836 11,358	16,292 69.1 16,518 65.9	1,043,050 442,803 1,084.250 450,797	131 12 121 14	18 11.2 21 13.5	
St. Louis-San Francisco† 1945	4,615 1,136,306 4.616 1,124,436	1,210,788 18,331 1,204,921 28,675	28,917 69.7 27,226 64.7	1,885,339 885,119 1,838,648 838,994	325 321	26 7.4 27 7.8	
St. Louis-San Fran. & Texas 1945 1944 St. Louis Southw. Lines† 1945	159 34,977 159 35,455	35,825 25 35,967 38 538,040 7,164	596 70.3	38,672 17,427 37,308 15,355	9	2 22.2	
St. Louis Southw. Lines 1945	1,600 530,693 1.600 545,924 4.325 1,186,004	538,040 7,164 555,401 7,822 1,190,288 33,597	20,352 73.7 19,079 71.3 31,975 68.1	1,239,714 554,170 1,164,144 503.637 2,106,926 939,047	115 5 117 3 253 1	24 16.7 24 8.6	
1944	4,339 1.150,950	1,154,822 26,984		2,106,926 939,047 2,114,220 913,397	260	18 6.5	
						/	

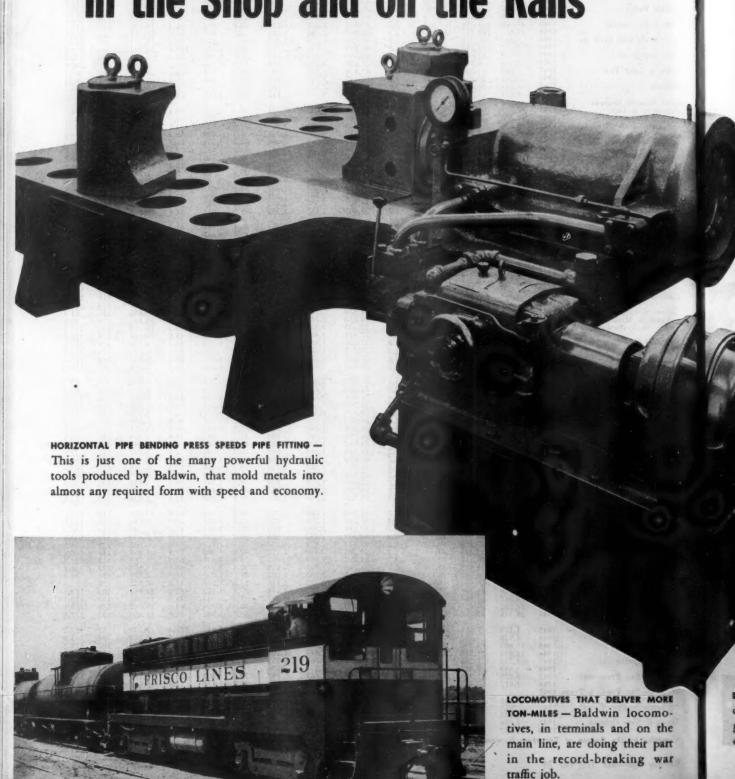
<sup>\*</sup> Report of receivers.
† Report of trustee or trustees.

Items for the Month of March 1945 Compared with March 1944

Items for the Month of	i Mare		compa				Net Net	Net	Nat	Cor	Was	Cont	W
0.		r reight c	ar a Oil IIIIE	Per	G.t.m. per train-hr.	train-mi.	ton-mi.	ton-mi,			daily	lb. per	Mi. per
Region, road, and year	Hom	e Foreign	Total	Cent B. O.	and tenders	and tenders	train- mile	car- mile	ear- day	ear- day	per road-mi.	g.t.m.	per
New England Region: Boston & Albany19		0.00	8,219	.3	21,886	1,682	679	27.6	509				
Boston & Maine	44 28	9 6,533	6,822 15,200	.3 2.9	23,536 39,100	1,705 2,635	712 1,150	28.4	614 891	31.2 35.6 47.2	11,174 10,825 8,682	167 198 106	98.5 95.2 98.3
N. Y., New H. & Hartf.† 19	44 1,94	5 11,941	13,886 28,671	2.3	36,212 29,339	2,411 2,425	1,054	29.4 27.3	1,100 620	58.2 32.9	8,154 10,787	107	107.6
Great Lakes Region:	44 2,81	4 24,182	26,996	2.2	32,504	2,351	1,038	28.0	696	37.4	10,455	108	98.7
Delaware & Hudson	44 3,51	5 7,196	12,775 10,711	2.7	48,059 49,401	3,379 3,118	1,784	37.4 38.9	1,551	70.2	22,976 23,559	114 112	80.2 83.8
Del., Lack. & Western 19	44 5,17	3 13,514	21,746	2.6	40,836 41,639	3,049 2,863	1,442	31.1	933	37.7 42.9	18,922 17,996	128 130	100.5 97.5
Erie	44 11,33	29,215	40,943 40,546 11,805	2.5 2.4 3.4	49,998 47,181 42,896	3,263 2,991 2,243	1,439	29.1	1,086	57.1 61.0	21,122	103	101.8
Lehigh Valley	44 2,32	6,678	9,003	3.8	43,535	2,270 3,229	1,035 980 1,553	28.7 29.0 34.1	833 1,035 757	40.8 56.8 35.1	9,604 8,744 19,222	83 88 106	131.1 132.5 123.3
New York Central19	44 6,60	0 23,126	29,726 165,815	1.6	46,206 39,524	3,048 2,687	1,420 1,251	33.4	884 892	43.9	21,219	120	153.4 113.7
New York, Chi. & St. L 19	44 43,81	6 108,137	151,953	2.3	40,047 45,826	2,685 2,718	1,234 1,282	32.5	1,017	50.8 88.5	15,161 21,359	111	114.9 151.8
Pere Marquette	44 2,53 45 2,20	0 11,930	17,956 14,130	1.9	45,059 40,140	2,593	1,178	30.0 32.5	1,975	100.4 58.9	20,393 9,283	94 92	164.8 105.7
Pitts. & Lake Erie	45 2,56	8,806 2 11,164	11,680 13,726	2.5 3.6	37,650 47,410	2,250 3,737	1,064 2,144	32.3 48.8	1,346	64.1 18.2	8,351 29,477	97 98	108.4 84.1
Wabash	45 5,14	2 10,256 4 16,639	12,848	2.6	50,615 45,769	2,512	2,151 1,189	51.6 30.6	1,360	19.4	31,444 12,518	97 108	83.4 129.7
Central Eastern Region:	0,00		19,607 97,543	3.5	44,927 29,333	2,393	1,116	29.8	1,415	65.9	11,452	114	122.2
Baltimore & Ohio	44 38,27	3 53,754	92,027 20,942	2.6 3.8	30,407 30,925	2,444 2,891	1,311 1,188 1,461	36.2 35.0 36.6	1,092 1,071 547	46.4 48.7 23.5	16,495 15,564 16,823	152 155 115	94.9 102.6 93.5
Chicago & Eastern Ill 19	44 4,87	6 20,586	25,462 6,180	1.4	27,450 35,447	2,709 2,069	1,328	36.3 32.6	400 1,334	18.6	17,112 8,516	150 120	104.8
Elgin, Jeliet & Eastern 19	44 1,93	5,744	7,675 14,985	2.3	35,594 17,820	2,203 2,394	991 1,295	32.3	1,405	73.5 13.1	11,130 14,398	121	132.6
Long Island19	44 8,61 45 3	5 6,980 0 7,464	15,595 7,494	2.7	15,833 6,594	2,312 863	1,254 369	43.0 29.7	344	12.3	14,052 1,187	143 323	101.1 53.5
Pennsylvania System19	44 45 118,78	5 135,339	5,527 254,124	3.4	6,528 34,527	906 2,901	386 1,407	32.7 34.5	84 808	4.6 36.6	1,315 21,288	335 122	51.6 99.6
Reading	45 9,54	8 29,428	231,505	3.1	34,442 34,501	2,747	1,301	34.3	836 767	40.2 27.5	21,150 21,391	134 109	105.6 88.7
Pocahontas Region: Chesapeake & Ohio19			39,469 52,623	1.7	29,602 54,844	2,532 4,010	1,353 2,261	41.7	638	61.3	19,197	135	89.8
Norfolk & Western	44 36,57	7 15.817	52,394 38,024	1.1	52,914 60,696	3,869 3,988	2,211 2,159	49.6 45.8	1,667	59.5 58.9	27,431 28,068	86 93	92.3 111.5
Southern Region:	32,58	7,773	40,354	1.6	59,718	3,941	2,146	47.4	1,511	54.2	27,098	95	103.4
Atlantic Coast Line19	44 8,19	7 23,329	29,981 31,526	1.6 2.1	30,947 29,895	1,921 1,869	844 786	29.6 28.7	1,073 945	58.2 54.7	6,749 5,860	111	104,3 101.6
Central of Georgia†	44 2,06	3 6,880	10,165 8,943	1.0	30,327 28,916	1,684	799 744	31.5	1,059	48.5 47.4	5,816 4,915	137 126	136.2 123.1
Gulf, Mobile & Ohio	1,86	7,402	8,054 9,269	.9	40,399 40,322	2,309 2,278 2,732	1,166	30.4	1,364	55.3	5,653	115	106.5
Illinois Central (incl. 19 Yazoo & Miss. Vy.y19 Louisville & Nashville19	44 18,89	3 32,136	49,668 51,029 44,018	1.2 .9 4.4	44,574 43,750 28,341	2,712 1,858	1,305 1,265 962	32.3 33.1 36.7	1,386 1,437 1,161	64.5 69.8 48.2	10,666 11,637 10,488	116 124 130	81.4 90.9 125.1
Seaboard Air Line*19	44 30,94	9 16,485	47,434 26,203	2.4	27,831 33,138	1,846	946 854	37.1 28.0	1,085	45.9 56.5	10,607	135	131.5
Southern	44 6,52	5 22,033	28,559 48,400	1.4	29,718 25,068	1,880 1,517	812 717	29.0 29.3	989	52.1 50.5	6,723 8,023	134 148	120.1 115.4
19	15,59	33,300	48,890	1.7	24,662	1,487	683	29.9	1,020	50.5	7,611	147	115.6
Northwestern Region: Chi. & North Western 19	14 21,20	7 25,971	48,842 47,178	3.1	34,380 32,668	2,208	1,040 1,024	31.5	754 683	34.2 31.7	4,385	129 136	83.1 81.2
Chicago Great Western19	1,06	6 4,338	5,389 5,404	1.2	36,491 35,349	2,115	965 924	30.2	1,795	84.4 77.7	6,345	128	130.9
Chi., Milw., St. P. & Pac.† 19	14 24,24	29,996	47,466 54,237	2.3	38,120 34,376 26,274	2,376 2,194 1,845	1,156	31.7 32.3	1,178 1,015 905	52.1 46.8	5,270 5,104	116 131	94.8 99.2
Chi., St. P., Minneap. & Om. 19 19 Duluth, Missabe & I. R 19	14 99	7,244	8,239 15,375	3.2 3.5	26,161 24,562	1,787	823 912	32.1 32.2 40.3	742	38.8 34.8 2.8	3,858 3,874 1,747	113 116 138	66.2 72.5 22.5
Great Northern	14 15,18	2 260	15,442 33,711	2.3	18,390 40,170	1,314 2,488 2,467	664 1,194	36.2 31.9	1,438	2.1 62.7	1,197 5,617	181	22.5 22.5 90.7
Min., St. P. & S. St. M.† . 19	14 22,94	3 25,028	11,310	1.8	36,223 30,703	1,743	1,174 820	34.2 30.7	1,166	52.3 49.6	6,218 2,597	115 106	103.4 104.5
Northern Pacific	6,62 15 13,82	7 8,902 4 16,064	15,529 29,888	2.7	33,098 43,709	1,928 2,716	924 1,383	35.4 33.4	1,045	48.1 56.9	3,859 6,575	102 137	133.9 85.5
Central Western Region:			38,637	3.1	41,168	1,908	1,381	35.5 35.1	1,290	\$3.5 44.4	7,024	138	93.8
Alton†	14 1.02	5,106	9,142 6,127 80,491	3.3 3.2	37,747 44,194	1.794	837 993	31.5 27.3	1,224	58.4 81.3	8,186 8,934	140 114	129.1 136.4
Atch., Top. & S. Fe incl. 19 G. C. & S. F. & P. & S.F.) 19 Chi., Burl. & Quincy 19	44 42,76 45 12,74	2 38,091	80,853 39,797	2.2	42,391 43,942	2,399 2,292 2,679	966 1,297	28.0 32.2	1,228 1,527	65.4 67.4	7,622 6,805	120 101	127.1 95.5
Chi., Rock I. & Pac.† 19	14 16,49	3 25,448	41,981 32,580	2.2	39,905 36,262	2,496 2,050	1,175 943	32.2 28.8	1,266 1,434 1,245	59.2 68.9	6,458 5,785	117 112	100.4 113.3
Denver & R. G. Wn.† 19	10,64	3 21,539 6,257	32,187 13,844	2.7	34,296 35,445	1,922	834 1,082	27.8 31.1	1,227	66.1 49.7	5,164 7,075	121 172	116.3
Southern Pacific—Pac. Lines 19	14 8,041 15 22,40	6,894	14,942 78,106	3.6	33,023 40,058	2,233	1,136 1,194	32.0 27.8	1,102 1,172	43.8 61.2	6,800 10,954	178	92.4 113.1
Union Pacific	5 24,50	39,473	78,429 63,975 63,989	2.5	38,293 48,120	2,696	1,142	27.3 30.0	1,043	55.5 84.7	10,306	103 129	110.1
Southwestern Region:			63,989 8,739	2.7	43,704	2,357	1,119	30.7	1,761	80.0	7,286	133	137.8
MoKansTexas Lines	14 1 02	7,682	9,608 38,049	.3 1.6	32,617 42,821	1,813	815 1,159	30.6 30.5	2,219	115.6	6,502 9,037	90 107	165.8 119.2
Texas & Pacific	11,00	31,513	43,149	1.3	41,815 41,594	2,444 2,260	1,108	31.3 27.2	1,592 1,623	79.0 86.4	9,432 7,590	107 92	127.5 101.4
St. Louis-San Francisco† 19	1,69 5,22	7,521	9,220 17,165	1.2 2.0 2.2	40,516 32,595	2,228 1,667	926 783	27.3 30.6	1,582	88.0 75.4	7.727 6,187	94 137	113.4 118.0
St. Louis-San Fran. & Texas 19	7,47	10,817	18,289 446	1.8	32,158 19,903	1,641	749 501	30.8 27.1	1,422	71.4	5,863 3,536	140 118	118.7
St. Louis Southw. Lines† 19	5 82	7,743	285 8,570	8.4	21,114 36,776	1,056 2,337 2,145	1,045	25.8 27.2	1,852 2,171	102.3	3,115	133	124.7
Texas & New Orleans 190	3,55	17,743	7,922 21,297 21,152	1.5 2.2 2.4	34,751 32,830 32,321	2,145 1,794 1,859	928 799 803	26.4 29.4 29.0	2,200 1,486 1,395	117.0 74.3 73.8	10,154 7,004 6,791	83 91 91	129.0 146.4 141.6
Compiled by the Bureau of Tra		nomics and						Subject 1			0,1771	-	11210



ms for the Month of March 1915 Compared with March 1914



Baldwin locomotives—steam, dieselelectric and electric—have been helping the railroads in their task of hauling more and more traffic with existing equipment—a traffic job that has astonished the world.

In railroad shops too, Baldwin equipment has been at work. Hydraulic Wheel Presses, Plate Planers and Bending Rolls for boiler shop work, Testing Machines and Instruments to guard against failure in materials, tracks and bridges, Diesel Engines to meet stationary power requirements—these are a few of the "manpower-multipliers" that Baldwin offers for the modern railroad shop.



UNIVERSAL TESTING MACHINES GIVE A PREVIEW OF PER-FORMANCE — There is no limit to the applications of testing machines and electronic testing instruments in any process where weight or safety of materials are important. Baldwin can meet all requirements in this field.

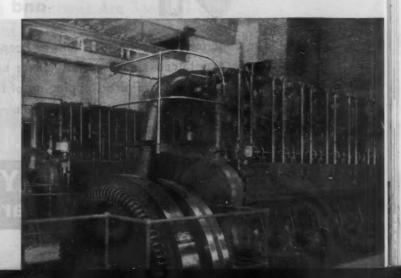
# BALDWIN



The Baldwin Locomotive Works, Philadelphia, Pennsylvania: Locomotive & Ordnance Division; Baldwin Southwark Division; Cramp Brass & Iron Foundries Division; Sandard Steel Works Division; The Whitcomb Locomotive Co.; The Pelton Water Wheel Co.; Baldwin Locomotive Works of Canada, Ltd.; The Midvale Co.

BALDWIN PRODUCTS FOR THE RAHLROADS—Steam, diesel-electric and electric locomotives, Diesel engines, Hydraulic presses, Special railroad shop equipment, Testing machines and instruments, Steel tires and rolled steel wheels, Crane wheels, Connecting rods and other steel forgings, Steel castings, Springs, Metal plate fabrication, Boilers, Non-ferrous castings, Bending rolls, Plate planers, Dynamometer cars.

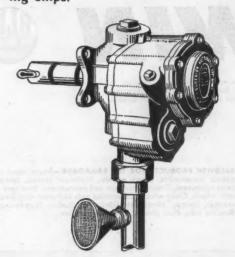
diesel engines for dependable power — Baldwin diesel engines in capacities from 210 to 1040 b.hp. give quiet, clean, trouble-free service to meet shop or pump-house power requirements.



# SUPERIOR 3-WAY FLUE ROLLER

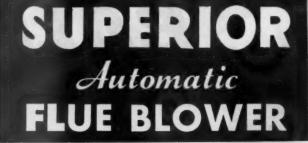
This Easier, More Practical Method does a Better Job and - — — — — —

The Superior 3-Way Flue Roller in one simple easily performed operation expands the tube in the sheet, forms a prosser on the water side and flares the end of the tube. Moreover, the expansion and prossering is accomplished without scoring the tube. There can be no distortion of flues, no fire-cracking in firebox end, no flying chips.



Expands
Prossers
Flares
in One Operation

- Saves 80 per cent in Time and Money



With this equipment any locomotive will stay on the road longer and give better performance.

The Superior Automatic Flue Blower keeps flues and Flue Sheets clean. That means maintained steam power, longer hauls, heavier loads, less fuel consumption. It means a definite stepping-up of transportation which today is one of the biggest problems confronting the nation. Let us send you performance charts and full information.

SUPERIOR RAILWAY PRODUCTS CORP. 7501 Thomas Boulevard, Pittsburgh, Penna.

# WHITCOMB Presents



A NEW 44 Ton Diesel Electric Locomotive Designed
To Meet the Post War Demand for Motive Power
That Is Compact --- Rugged and Dependable.



The Full View Cab Meets Hearty Approval All Along the Line.

# Bond relikes plus continuous QNIT JJIW UOY the Might 7th! tween departments help to be QNIT JJIW UOY arrall Savage Plus is the mainstay of

Trainman Signals Are Easier to Receive.
Switching Operations Are Speeded Up.
Spotting of Cars is Made Easier.
Comfortable Cab Lessens Fatigue.
Greater Safety Factor.



er

THE WHITCOMB LOCOMOTIVE CO.

Subsidiary of

THE BALDWIN LOCOMOTIVE WORKS



RE-SOLICITATION is the keynote for a victorious "mop up" in the Mighty 7th War Loan. Bond rallies plus continuous competition between departments help to keep Bond subscriptions on a quota-topping climb. Strategic poster displays...showings of "Mr. & Mrs. America," the Treasury film . . . distribution of the War Finance Booklet, "How To Get There," and the handy Bond-holding envelopes play an important part. But, above all else, arrange to have

every employee asked once more—and personally urged once more—to meet his personal quota in the Mighty 7th!

The Payroll Savings Plan is the mainstay of every War Loan—meeting your plant quota is vital to the success of the 7th! Remember we have to make two drives in 1945 do the work of three last year. Put on an intensive "mop up" final to help mop up the Japs, cut the tentacles of inflation—and lay the foundation of security.

The Treasury Department acknowledges with appreciation the publication of this message by



# RAILWAY AGE

This is an official U. S. Treasury advertisement prepared under the anspices of Treasury Department and War Advertising Council \*

fire as

Model

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# Safety Approved R. R. Equipment

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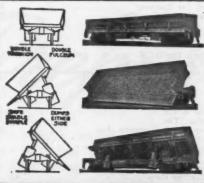
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# Index to Advertisers

# June 16, 1945

A		
Air Reduction Sales Company American Arch Company, Inc. American Creosoting Company American Locomotive Company 7, 62a,	61	Lima Locomotive Works, Locomotive Firebox Comp
American Steel Foundries Armco Railroad Sales Co., Incorporated Auto Engine Works (Inc.)	23 18 73	Magor Car Corporation Mahon Company, The R. Master Builders Company, Merritt-Chapman & Scott
В		Miner, Inc., W. H
Baker Industrial Truck Division of The Baker-Raulang Company	6	
Baldwin Locomotive Works, The 64, 65, Barco Manufacturing Company, Not Inc. Bethlehem Steel Blaw-Knox Division of Blaw-Knox Company	67 20 8 16 15	Nathen Manufacturing Co National Malleable and St
Budd Manufacturing Co., Edward G. 14, Buffelen Lumber & Mfg. Co		Ohio Locomotive Crane C
c		Okonite Company, The Oliver Iron and Steel Corrowweld Railroad Service Company
Carey Co., Inc., Thomas F. Clark Tructractor, Division of Clark Equipment Company Classified Advertisements	72 69 72	
Continental Machines, Inc.  Cummins Engine Company, Inc.	19	Pettibone Mulliken Corpor Pittsburgh Steel Foundry Portland Cement Associat
D		
Differential Steel Car Company Dolphin Paint & Varnish Co., The	73 70	Railway Educational Burea Ross and White Company Rotary Lift Co.
E		
Edwards Co., Inc., The O. M. Electric Tamper & Equipment Co. Electro-Motive Division, General Motors Corporation Front Co.	17 24 over	Schaefer Equipment Comp Silent Hoist & Crane Co. Simmons-Boardman Publish
Fairbanks, Morse & Co	37	Sinclair Refining Company Sonken-Galamba Corp.
Flintkote Company, The Franklin Railway Supply Company, Inc.	26	Standard Car Truck Compa Standard Railway Equipme Streeter-Amet Company, Superheater Company, The Superior Engines Division
G C		Superior Railway Products
General Electric Company General Steel Castings Corp. 4, Get Together Department Glidden Company, The Gold Car Heating & Lighting Co. Gustin-Bacon Manufacturing Co. 10,	7 5 72 47 73	Timken Roller Bearing Co Truscon Steel Company, S poration
Residence of the second second second		N - 1 31 1101 test
н		Union Carbide and Carb n Union Switch & Signal Co
Hanna Company, The M. A.  Harbison-Walker Refractories Co.  Houde Engineering Division of Houdaille-Hershey Corporation Hunt-Spiller Mfg. Corporation Hyman-Michaels Company	29 61 28 63 73	Unit Truck Corporation United States Steel Suppl
Participant Control State		Vapor Car Heating Co., I Viking Pump Company
Industrial Brownhoist Corp.	43	
Ingersoil-Rand Iron and Steel Products, Inc.	27 72	Washington Veneer Co Wirton Sted Co Westinghouse Air Brake (
TINE AT THE PROPERTY OF		Whitcomb Locomotive Co., Locomotive Works
Justrite Manufacturing Company	69	Willson Products, Incorpor
K		
Kerite Insulated Wire & Cable Company, Inc., The	30	Youngstown Sheet and Tul

L	
Lima Locomotive Works, The Locomotive Firebox Company	59 31
M	
Magor Car Corporation Mahon Company, The R. C. Master Builders Company, The Merritt-Chapman & Scott Corporation Miner, Inc., W. H.	35 44 41 32 3
Nathen Manufacturing Co	77
National Maticaute and Steel Castings Co	34
0	
Ohio Locomotive Crane Co. Okomite Company, The Oliver Iron and Steel Corporation Oxweld Railroad Service Company, The	73 70 51 36
P	
Pettibone Mulliken Corporation Pittsburgh Steel Foundry Corporation Portland Cement Association	39 33 46
R	
Railway Educational Bureau, The Ross and White Company Rotary Lift Co.	72 38 71
Schaefer Equipment Company Silent Hoist & Crane Co. Silent Hoist & Crane Co. Simmons-Boardman Publishing Corporation Sinclair Refining Company 12, Sonken-Galamba Corp. Standard Car Truck Company Standard Railway Equipment Mfg. Company Streeter-Amet Company Superheater Company, The Superior Engines Division of The National Supply Co. Superior Railway Products Corp.	45 70 73 13 72 49 58 48 62 52 66
was fast the ground of the first	
Timken Roller Bearing Co., The Back Co Truscon Steel Company, Subsidiary of Republic Steel Cor- poration	ver 40
U	
Union Carbide and Carb n Corporation Union Switch & Signal Company Unit Truck Corporation United States Steel Supply Company	36 56 2 25
v apped	
Vapor Car Heating Co., Inc. Viking Pump Company	73 70
w.	
Washington Veneer Co. W-irton Ste. Co. Westinghouse Air Brake Co. Whitcomb Locomotive Co., The, Subsidiary of the Baldwin Locomotive Works	22 53 54
Willson Products, Incorporated	71
Y	
Youngstown Sheet and Tube Company, The	50



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